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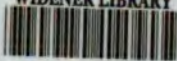
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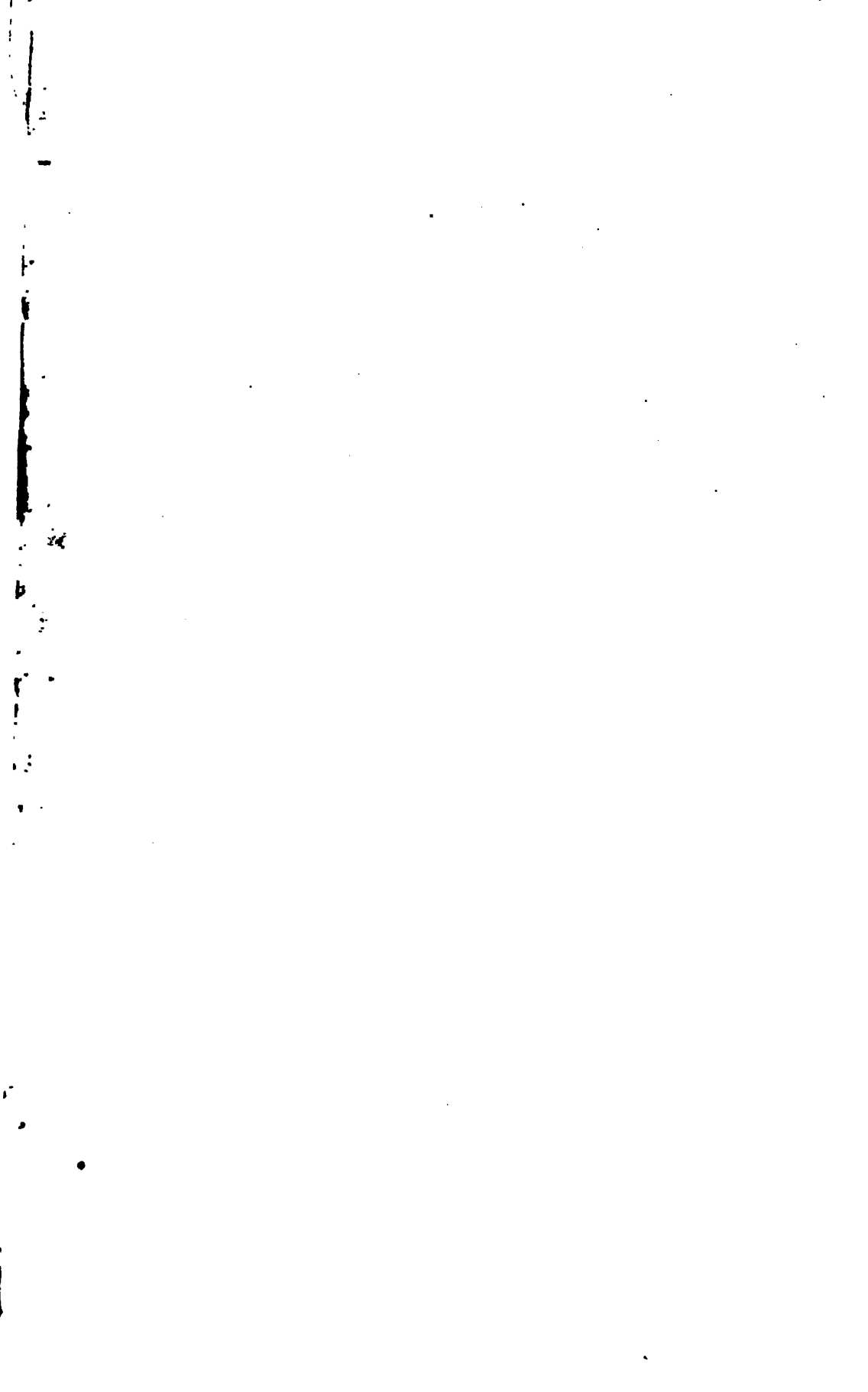


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MAP

of the
GROUNDS FOR THE

2d STATE FAIR of OHIO.

1 M. WEST OF COLUMBUS.

OLD COURT HOUSE.

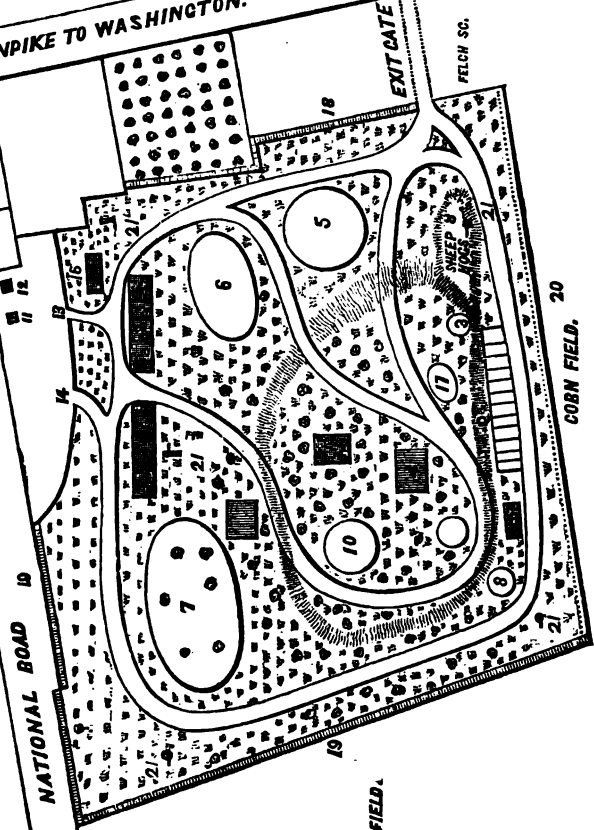
1 MILE TO COLUMBUS.

FRANKLINTON.

TURNPIKE TO WASHINGTON.

1 MILE TO COLUMBUS BY THE FORD.

1. Floral Hall.
2. Manufacturers' and Agricultural Hall, and machinery requiring power.
3. Society Tent.
4. Domestic Manufactures.
5. Horse Ring, (Stallions.)
6. Ring for Saddle, Harness and Draft Horses.
7. Large ring for the exhibition of the different grades of Cattle.
8. Poultry and Rabbit House.
9. Pen for Hogs and Sheep.
10. Ground for Dairy products, seeds, honey, &c.
11. Ticket Office.
12. Business Office.
13. Exit Gate only, and for persons on foot.
14. Entrance Gate for carriages and horses.
15. Grand Exit Gate for carriages and horses.
16. Confectionery.
17. Refreshment and Eating.
18. Cattle Sheds.
19. Horse Sheds.
20. Hitching ground for horses.
21. Pumps.



9
SIXTH ANNUAL REPORT
OF THE
BOARD OF AGRICULTURE,
OF THE
STATE OF OHIO,
TO THE
FIFTIETH GENERAL ASSEMBLY,
FOR THE YEAR 1851.

[BEING THE FIRST SESSION UNDER THE NEW CONSTITUTION.]

COLUMBUS:
PRINTED BY S. MEDARY.
1852.

~~V. 4255~~

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1861, Mar. 13.

Gift of
Wm. G. Ward, Esq.,
of Marietta, Ohio.

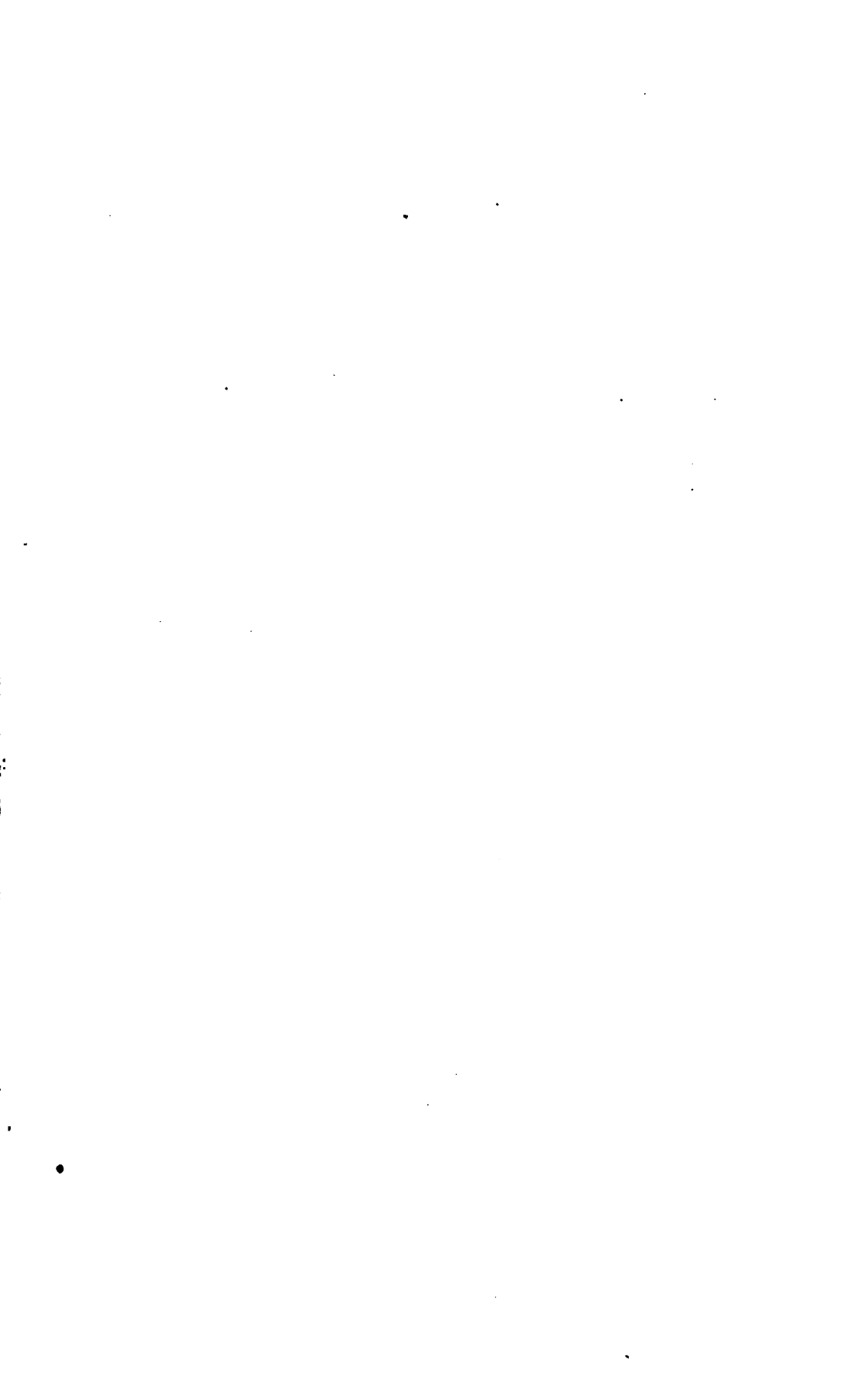
P R E F A C E .

THIS REPORT, though less voluminous than the preceding, is larger than was intended. The matter furnished, has been abridged where it could well be done, but the Societies have been in the habit of giving their statistics in the form of the answers to the general circular issued six years ago. This was admirably adapted to the object in view, for collecting statistical information, for learning the various modes of culture of the staples of Ohio, in its different sections—the diseases—the insects—freezing out, &c., required to be known and studied, to be guarded against. The numerous details upon these and kindred subjects, repeated and varied from year to year, have fulfilled their end, and it is thought that a circular of different form could be prepared, the answers to most of which might be put in tables, which would be as useful, more convenient for reference, occupy much less space, and save the State many thousand dollars annually in the printing bills. The Societies' Reports also might be tabulated in many particulars, so that their time of organization—their principal officers—number of members—income and disbursements—amounts in treasuries—amounts due State Board from shows—escheated lands—premium crops—and various other matters could be brought within a bird's eye view, and enable the reader to examine, compare, see averages, and draw conclusions on a great variety of topics, that under the present and past system require much labor and time to develop. Remarks and suggestions should also be made by officers of county societies, and more time should be given to the collecting of materials for their reports. As received, they are worthy of high commendation, but the preparation is generally put off till the last moment, and then they are written in a hurry and with little suitable preparation.

The Report of the Corresponding Secretary, shows the amount of labor performed in that office—a good reason why he could not visit many of the counties, and prepare and deliver addresses before them. The results of analyses of the soils of Pike county, and remarks on them and on the soils and geological relations, and suggestions for improvement are given; and it is believed that many things are mentioned in that report and in the essays of W. W. Mather, p. 177; 206, and of C. Whittlesey, p. 494—that will prove useful to the farmers of Ohio. By the direction of the President, the time of organization of each county society, and a list of its officers was requested, with a view to having in the published records of the Board, materials useful perhaps in the future history of the agricultural movement in Ohio. Several addresses before the agricultural societies have been published in this volume, at the special request of the societies, as parts of their reports.

W. W. MATHER.





NAMES OF THE MEMBERS

OF THE

BOARD OF AGRICULTURE FOR THE YEAR 1852.

PRESIDENT,

ARTHUR WATTS.....Chillicothe.....Ross county.

TREASURER,

S. MEDARY.....ColumbusFranklin county.

RECORDING SECRETARY,

J. G. GEST... ..XeniaGreene county.

MEMBERS.

C. SPRINGER.....Meadow Farm.....Muskingum county.

A. TRIMBLE.....Hillsboro'.....Highland county.

J. M. EDWARDS.....Canfield.....Mahoning county.

M. L. SULLIVANT.....Columbus.....Franklin county.

W. CASE.....Cleveland.....Cuyahoga county.

P. ADAMS.....Huron.....Erie county

R. W. MUSGRAVE.....Sulphur Spring.....Crawford county.

EXECUTIVE COMMITTEE.

ARTHUR WATTS, *President*.....Chillicothe.

M. L. SULLIVANT.....Columbus.

WM. CASE.....Cleveland.

NAMES OF THE MEMBERS

OF THE

OHIO STATE BOARD OF AGRICULTURE,

AS ARRANGED AT THE MEETING IN CLEVELAND, MAY 7, 1882.

ARTHUR WATTS, *President* Chillicothe, Ross county, O.

S. MEDARY, *Acting President*, during Dr. Watts' absence in Europe.... Columbus, O.

M. L. SULLIVANT, *Treasurer*..... Columbus.

J. G. GEST, *Recording Secretary*..... Xenia, Greene county.

MEMBERS.

C. SPRINGER Meadow Farm, Muskingum co.

ALLEN TRIMBLE Hillsboro', Highland county.

J. M. EDWARDS..... Canfield, Mahoning county.

WILLIAM CASE Cleveland, Cuyahoga county.

PHILO ADAMS Huron, Erie county.

R. W. MUSGRAVE..... Sulphur Spring, Crawford co.

EXECUTIVE COMMITTEE.

S. MEDARY, acting for Dr. Watts Columbus.

WILLIAM CASE Cleveland.

R. W. MUSGRAVE..... Sulphur Spring, Crawford co.

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SIXTH ANNUAL REPORT

OF THE

OHIO STATE BOARD OF AGRICULTURE.

I.

PRESIDENT'S REPORT.

To the Honorable General Assembly of the State of Ohio :

I herewith submit to you, the sixth annual report of the State Board of Agriculture, which, together with that of the corresponding Secretary, will exhibit the action of the Board for the past year.

The great Agricultural interest, since the last report, has been prosperous, and although there was an entire failure of fruits in the central region of the State, and the crops in some places injuriously affected by an extreme drought, still there has been a fair average, and owing to an increased price for some products, the labor of the husbandman has been fully rewarded. From an examination of the Treasurer's report, it will be perceived that after paying the office expense, salary of Secretary, traveling expenses of members of the Board, and the very great and unavoidable expense incident to two State Fairs, besides distributing several thousand dollars in premiums for various objects, for the general encouragement of Agriculture, such as improved breeds of stock, agricultural implements, domestic manufactures, and essays, to be published for the general benefit, our treasury is still in a good condition. In accordance with the recommendation of the delegates from the different county societies at their session in December, 1850, the Board engaged the services of Prof. W. W. Mather, a gentleman of high scientific attainments, but from motives of economy, the Board have discontinued

the office of corresponding Secretary, still securing a portion of his services in our office, at consequently a reduced compensation.

As my term of office as President of the Board is about to expire, I do not now feel that it is improper to allude to the individual services of members, and to say that our meetings have generally been full, and *always* cordial and harmonious—that the members have fully appreciated the great duties and responsibilities resting upon them, and have exhibited an earnest desire to discharge them so as promote the interest, and accelerate the progress of the glorious cause in which they are engaged. Agricultural Societies have been multiplied throughout our State, and include among their members very many able and zealous persons, of whom we had a sample as representatives, from the different county Agricultural Societies, at the meeting of the Board in December, and who, for practical information and general intelligence, have not been surpassed, if equalled, by any similar body.

In order to meet the great expenses incident to the preparation of the Fair, the Treasurer, Col. S. Medary, and the President, on their individual responsibilities, borrowed four thousand dollars; the citizens of Columbus, also pledged themselves to the payment of three thousand dollars, only a part of which, has yet been realized.

The great labor and responsibility of preparing, arranging and conducting the exhibition of the industrial skill and agricultural products and resources of the State, devolved upon the executive committee, consisting of Messrs. Watts, Pugsley, and the President, and to the efficient, able and faithful services of these gentlemen, and likewise of the Treasurer, I can with great pleasure bear complimentary testimony, and to them attribute much of the success of the Fair.

Much arduous labor was performed during the Fair, by the Recording Secretary, J. G. Gest; and to Mr. Wilson, the assistant Treasurer, the Board awarded a silver cup as a complimentary testimony of his valuable services. The Board would here likewise return thanks, and acknowledge the liberality of the different rail road companies, who generously carried passengers upon extra trains at half price, and articles and stock intended for exhibition, free of charge; and also acknowledge an appreciation of the liberal and enlightened policy of the Board of Public Works, in remitting the toll upon articles passing over the great thoroughfares under their control.

The second Ohio State Fair was held near Franklinton, one mile west of Columbus, on the 24th, 25th, and 26th of September, 1851, and it may well be said to have been a proud occasion, for here were displayed

numerous varieties of stock, grain, implements, machines, raw materials, manufactures, sculpture, paintings, and other fine arts, as well as specimens in almost every branch of human industry, illustrative alike of the skill, taste, and ingenuity of our people; here likewise were congregated day after day, thousands upon thousands of our free and intelligent, moral and orderly people, and we are gratified to say that our Fair passed off without accident, or any riotous or disorderly conduct, and without *intoxication*, and if the Ohio Fair has ever been beaten, the *Fair of Ohio* are without competition, and we boldly challenge the world to a comparison.

The Fair ground, peculiarly and beautifully adapted by nature for such an exhibition, was laid out conveniently, and over a mile of broad carriage ways, afforded visitors an opportunity of viewing the general arrangements. On the outer and inner sides of the way, sheds and stables three thousand feet in length were provided for horses and cattle, besides one hundred separate apartments, for sheep, hogs, and other stock, and one hundred feet in length, by two stories high of coops for poultry. Ample as this provision seemed, in many cases the accommodations were inadequate to the numbers. The quality of the stock offered for exhibition, including horses, mules, asses, different breeds of cattle, sheep, hogs, deer, buffalo, and elk, was of the highest order, manifesting the skill, enterprise, and intelligence, presiding over this branch of domestic economy. The numbers presented for exhibition were greater than that at any other Fair hitherto held in the Union.

Machinery Hall, a building 60 by 100 feet in size, was filled with various kinds of useful and ingenious machines, requiring power to exhibit them in practical working operation; the whole was driven by a superb steam engine, built expressly for the purpose, by the enterprising machinists, Ambos & Lennox, of Columbus.

Mechanics' Hall, a building 60 by 200 feet, was likewise filled with an almost endless variety of implements and manufactured articles, very creditable to the skill of our ingenious mechanics. In Domestic Hall, a building 60 by 150 feet, were placed the beautiful and varied display of articles falling into this division. The numerous specimens of domestic cloths, flannels, blankets, quilts, gloves, stockings, carpets, cheese, butter, and bread, presented by our fair country women, clearly proved that they fully understood the useful and practical; and the specimens of fine needle work, netting, embroidery, crochet work, flower and fruit paintings, and drawing, wax, paper, silk, and worsted flowers, shell work, patch work, pencil drawings, daguerreotypes, monochromes, water color

and oil paintings, fully evinced that they were equally well versed, and skilled in the beautiful and ornamental; and the eloquent music drawn forth from the many splendid pianos, and other instruments showed them proficient in this refined accomplishment.

Floral Hall, which occupied one of the pavilion tents, 90 by 120 feet in length, was superbly decorated with a choice variety of fruits, shrubs, and flowers; the whole was under the superintendence of Dr. I. G. Jones, President of the Columbus Horticultural Society, assisted by the members thereof, and guided by the taste of the ladies.

The whole scene enlivened by bands of music, together with the great number of animals, the various halls filled with objects of interest, the immense concourse of well dressed, intelligent spectators, beautiful and accomplished women, will long be remembered. The executive committee make public acknowledgement of the valuable and gratuitous services of Messrs. L. Buttes, Esq., H. C. Noble, Esq., Col. A. G. Brown, and Dr. I. G. Jones, in assisting in preparations for and during the Fair, and some three hundred gentlemen and ladies as awarding committees, from different parts of this and other States.

It was no easy matter so to arrange the details, and conduct such an Exhibition, as to avoid giving dissatisfaction to some; and there may be those who have been disappointed, and imagine their claims have been overlooked or neglected, but such cases are rare, and arise out of the very necessity of the occasion.

The Board and Executive Committee, spared no pains on their part, to secure a fair and impartial judgment and award, by the selection of intelligent and competent persons for the judges and awarding committees, and on their verdict *alone* have the premiums been distributed; and upon the whole, we believe their decisions have been acknowledged to be just, and have therefore given general satisfaction. The interest in our Exhibition, manifested in the beginning, continued unabated, until its final close on the third day, when the Hon. Wm. Allen, of Ohio, who had been invited to deliver the annual address, took the stand and performed this duty in an able and eloquent manner, to the entire satisfaction of the vast multitude. Gov. Wright, of Indiana, who was present, likewise addressed the people, as did also Senator Douglas, and the Hon. Lewis F. Allen, of N. Y.

The expectations of the most ardent friends of agricultural improvements, were fully realized, and such an interest aroused in the public mind as cannot but result beneficially to Agriculture and the Mechanic Arts. It is now some years, since a few zealous friends of the cause, in

the central and southern portion of the State, first attempted to unite their efforts to promote the cause of Agriculture; and now this union has become general, and through the instrumentality of the State Board, may accomplish much good, for by the combination of intelligent farmers in the county Agricultural Societies, acting by, and through the same common center, knowledge of their profession will be advanced, and improvements and discoveries diffused throughout the entire community. And of the utility of such combinations, the Agricultural statistics of the last census furnish the most convincing and conclusive evidence; for it is found that in those States where Agriculture has been most encouraged, and where Agricultural societies have been most active, there the increase of Agricultural products have been greatest.

If, by any discovery, a new or improved system of cultivation, the product of the acres appropriated to wheat and corn alone in this State, were increased to the amount of three bushels to the acre, millions of dollars would be annually added to the wealth of the country by this apparently small increase; and no intelligent farmer doubts that a greater increase might be obtained.

Taking one of our great staples, Indian corn for instance, and admitting the average product to be forty bushels per acre, the increase at twenty-five cents per bushel, would amount to over a million dollars annually, and so in proportion to all our other grains. The great interest in which so much of the capital of our State is invested, which bears so great a proportion of taxation, and produces so much revenue, so intimately connected with the commerce, and the mechanic arts, and upon which they in a great measure depend, and which directly gives employment to one million and a quarter of our people, is surely worthy of every legitimate aid and encouragement.

It may receive substantial aid and encouragement by such a policy, in regard to our roads, canals, and rail roads, as will insure a rapid, easy, and cheap transmission to market, of the articles of our productive industry.

The power which rail road corporations possess, of levying such a rate of toll upon products passing over their roads as they, in their caprice or judgment see fit to impose, thereby, not only affecting the price in different places, but enhancing and depressing the value of lands, also thus giving undue advantage to some sections of the country over others, is a tremendous power not to be lightly or capriciously exercised, and is one which may now, or hereafter require restriction. We respectfully recommend the subject to your earnest consideration. We are fully

convinced of the benefit that would arise from the fuller and more careful collection of Agricultural statistics; the establishment of an Agricultural Bureau, under the supervision, or in connection with the State Board, and the endowment of an Agricultural school in connection with an experimental farm, as well as an Agricultural and Geological survey of the State, but we do not now recommend them—leaving them to such action as you, in your wisdom, conclude they deserve. But as the school laws will probably be revised, and the standard of the qualification of teachers raised, we do suggest, that inasmuch as Agriculture is based upon scientific principles, in order to reap the full benefit from the knowledge and application of them in practice, especially as regards the analysis and improvement of the soil, the composition of manures, and the fattening of animals, a simple text book might be prepared by authority, and the elementary principles required to be taught in the *Peoples, Colleges*, our common schools; and we confidently expect that the cause of Agriculture will receive such enlightened consideration at your hands, as its great importance demands.

M. L. SULLIVANT,
President of Ohio State Board of Agriculture.

II.

PROCEEDINGS OF THE BOARD THROUGH THE YEAR.

MEETING OF THE OHIO STATE BOARD OF AGRICULTURE.

AGRICULTURAL ROOMS,

COLUMBUS, February 13, 1851.

Present — Messrs. Sullivant, Medary, Gest, Springer, Watts, Pugsley, Trimble and Holloway.

On motion of Mr. Springer, the Board proceeded to make up the premium list, and committees for the Annual Fair, to be held for the present year. Having spent the day engaged in such business, the Board adjourned to nine o'clock A. M. of the 14th.

FEBRUARY 14

The Board met pursuant to adjournment. Present, the same members as yesterday. The Board resumed the business of the premium list and committees, and having spent the day thereon, adjourned to meet at nine o'clock A. M. on the 15th.

FEBRUARY 15.

The Board met pursuant to adjournment. Present, the same members as yesterday. The Board resumed the consideration of the business of yesterday, and having gone through with the same, it was ordered that the Corresponding Secretary, under the direction of the Executive Committee, arrange the premium list, committees, and rules and regulations for the government of the Fair, for publication.

On motion of Mr. Springer, it was

Resolved, That the Executive Committee be authorized to select a suitable site for the State Fair, and proceed to make such necessary arrangements as they may deem proper for its accommodation, and to conduct it through; that they be authorized to collect the subscriptions of the city of Columbus, and apply them to the expense of preparation, and that the President and Recording Secretary draw upon the Treasury for such funds as may be necessary to complete the enterprise; said committee to keep and report a correct account of said expenses to the Board.

On motion of Mr. Watts, it was

Resolved, That all premiums of ten dollars, and upwards, that may be awarded by the Board, at the next Fair, shall be paid in plate.

On motion of Mr. Gest, the following resolutions were adopted :

Resolved, That the Executive Committee be authorized and directed to audit and pay out of the contingent fund, the traveling expenses of the Corresponding Secretary, when incurred by him in the performance of the duties of his office.

Resolved, That the Legislature be requested to place in the possession and control of the Board, the chemical apparatus and instruments that were used in the geological survey of the State ; and, also, to appropriate the sum of five hundred dollars towards fitting them up.

Resolved, That the Legislature also be requested to give the Board the use of the small brick building in the rear of the old Court House, in Columbus, for a laboratory.

Resolved, That the county agricultural societies that are under the supervision of the Board, are hereby advised and requested to take measures to have the different soils of their respective counties analyzed by the chemist of the Board.

Resolved, That it shall be the duty of the agricultural chemist of the Board, when he shall have analyzed the soils of a county, to prepare a practical paper on the results thereof, together with a general outline of the geological formation, topography, and agricultural resources of such county, for publication in the transactions of the Board.

Resolved, That the chemist of the Board be authorized to charge each county the sum of fifty dollars for analyzing their soil ; but no analysis of the soil of a county shall be made, unless the fee therefor shall be first provided.

Resolved, That the chemist of the Board shall select, in person, the soils of the counties he may analyze.

Resolved, That the farmers of the State are hereby requested to send specimens of their soils for analysis; and that the chemist of the Board may charge such fee therefor as will pay the cost thereof.

On motion of Mr. Trimble, the President of the Board was directed to send a copy of the resolutions, relating to the chemical apparatus, instruments, and laboratory building, to the Speakers of each branch of the Legislature.

On motion of Mr. Springer, it was

Resolved, That A. Lodge, of Belmont county, and H. J. Cox, of Muskingum county, be allowed premiums on their wheat crops, on condition that they conform their reports to the rules of the Board, within twenty days ; and that the Corresponding Secretary inform them of this order.

On motion of Mr. Medary, it was

Resolved, That Mr. Lawrence's proposition and plan for an Agricultural Bureau at Washington, and National Industrial Association, be referred to the Executive Committee, with directions to report thereon to the Board at the next annual meeting.

Ordered, That the Executive Committee have power to amend the premium list and the committees, as further examination and circumstances may require.

On motion of Mr. Trimble, it was

Resolved, That the Board cordially recommend to the patronage of the people of Ohio, the "Western Agriculturist," edited by Prof. W. W. Mather, Corresponding Secretary of the Board.

Ordered, That the first premium on the greatest product of barley per acre, be awarded to Samuel Dallas, of Greene county, he having raised $63\frac{1}{4}$ bushels per acre.

Ordered, That the second premium be awarded to A. Glenn, of Hamilton county, he having raised $60\frac{1}{4}$ bushels per acre.

Ordered, That the first premium on the greatest product per acre of onions, be awarded to J. B. Tillinghast, of Ross county, he having raised 81 bushels on 42 rods of ground, or $308\frac{1}{4}$ bushels per acre.

The committee appointed by the City Council of Columbus, waited on the Board, reported that the sum of three thousand dollars, at *least*, would be ready at the proper time, to defray the expenses incident to the State Fair, to be held in Columbus.

On motion of Mr. Gest, it was unanimously

Resolved, That the Hon. Thomas H. Benton be invited to deliver the annual address at the State Fair.

After auditing sundry accounts, the Board adjourned at 10 o'clock P. M., *sine die*.

M. L. SULLIVANT, *President*.

J. G. GEST, *Recording Secretary*.

**RESOLUTIONS BY THE EXECUTIVE COMMITTEE OF THE STATE
BOARD OF AGRICULTURE, APRIL 25, 1851.**

1st. *Resolved*, That two thousand dollars value of plate be ordered, to be awarded as premiums at the Second Ohio State Fair, of the value of \$10, and over, according to the resolutions of the Board on the 13th, 14th and 15th of February, 1851, and also that a \$20 pitcher, and cups of the value of \$15 and \$10, be sent on to the office of the State Board, as samples of what the makers propose to execute for the Board, and that these be sent by express, as samples, before the contract be closed. The plate shall be plain and heavy, of the fineness of the standard American silver coin; the pitchers to have handles, and the cups none.

2d. *Resolved*, That one hundred and fifty medals be also ordered, to be made after the models, and containing silver of the value of three dollars, and they be made of the fineness of the medals of the New York State Agricultural Society.

3d. *Resolved*, That 1,000 copies of the Pomological Report be printed in pamphlet form, at the expense of the Board, provided the expense does not exceed

4th. *Resolved*, That \$300 be conditionally appropriated for fitting up the Chemical Laboratory, if the President and Corresponding Secretary think it best so to do.

5th. *Resolved*, That one-third more circulars be printed than there are committee men on the Premium List, and that the committee be requested to reply immediately as to their acceptance or non-acceptance.

6th. *Resolved*, That the ground near Franklinton, examined by the Executive Committee on the 24th of April, be used as the grounds for the exhibitions at the Second Ohio State Fair.

7th. *Resolved*, That M. B. Bateham's bill of \$2 be allowed and paid.

8th. *Resolved*, That the Corresponding Secretary so divide the printing to be done for the Board, that the profit to be derived therefrom be equally divided.

9th. *Resolved*, That 10,000 copies of the Premium List be printed in pamphlet form, for the use of the Ohio State Board.

PROCEEDINGS OF THE EXECUTIVE COMMITTEE OF THE OHIO
STATE BOARD OF AGRICULTURE, AT THEIR SESSION, JUNE 10TH
AND 11TH, 1851.

1st. *Resolved*, That no aged animals, that have had first premiums awarded to them heretofore at the Ohio State Fair, shall compete for first premiums this year ; but may compete for diplomas in sweepstakes.

2d. *Resolved*, That additional premiums of twenty and ten dollars be offered for the best and second best crops of wheat and corn, and that the grounds on which these additional awards shall be made, be not less than five acres each, and not less than 30 bushels per acre for wheat, and not less than 100 bushels per acre for corn.

3d. *Resolved*, That the premiums offered for rye and oats shall be for crops not less than 30 bushels per acre for rye, instead of 40 bushels, and not less than 50 bushels per acre for oats, instead of sixty bushels, heretofore published on the Premium List.

4th. *Resolved*, That the "best plow harness," "best wagon harness for farm," "best carriage harness," "best saddle and bridle for general purposes," as published on the Premium List, page 24, be transferred from the "Implements and Manufactured Wares, open to all," to the head of "Saddlers' and Shoemakers' Ware, open to all," on page 37 of the Premium List.

5th. *Resolved*, That the President be authorized to make such contracts and employ such persons as may be necessary for the preparation of the grounds for the State Fair, and audit the accounts for the same.

6th. *Resolved*, That \$100 be appropriated to aid in putting up a steam engine on the Fair grounds, the steam power to be furnished to machinery, and employed under the direction of a committee ; and that notice be given, that persons wishing to compete for premiums on steam engines may give notice, by the 4th of July, of their intention to compete ; and that the amount hereby appropriated, be awarded to the steam engine that shall receive the premium ; and if no application be made by the time specified, a contract be made with some person, without the above condition.

7th. *Resolved*, That three hundred and fifty bound copies of the Fifth Annual Report be furnished to the office of the Ohio State Board of Agriculture, and that each County Agricultural Society Library be furnished with a copy.

8th. *Resolved*, That 100 copies of each of the 1st, 2d, 3d and 4th Annual Reports of the Ohio State Board of Agriculture, be bound, so as to make 100 volumes, each of which shall contain the 1st, 2d, 3d and 4th Reports ; and that a table of contents for these reports be printed and bound in these volumes ; and that 100 extra copies of the table of contents be printed.

9th. *Resolved*, That Thompson, Gulick & Co., have the exclusive privilege of selling refreshments on the Fair Grounds, (except refreshments, and such as the Board may choose to provide for themselves, guests, committees and employees,) for the sum of six hundred dollars, for which the President is authorized to contract with said Thompson, Gulick & Co., on good security.

10th. *Resolved*, That forage be furnished by the Board, gratis, to the stock of exhibitors who may compete for premiums.

11th. *Resolved*, That the premiums of money, medals, and plate, be distributed on the last day of the Fair.

12th. *Resolved*, That the Corresponding Secretary be authorized to have the copies of the Premium List corrected, before more be distributed.

The above is a true copy of the proceedings of the Executive Committee.

W. W. MATHER,
Cor. Sec. O. S. B. of Ag.

LIST OF PLATE ORDERED BY THE OHIO STATE BOARD OF AGRICULTURE, FOR AWARDS AT THE STATE FAIR IN 1851.

19	Pitchers	of the value of	\$20	-----	\$380 00
6	do	do	do	25 -----	150 00
6	do	do	do	30 -----	180 00
2	do	do	do	50 -----	100 00
92	Cups	do	do	10 -----	920 00
18	do	do	do	15 -----	270 00
					<hr/>
					\$2,000 00

150 medals, also, were ordered, each of which was to contain three dollars value of standard silver.

ANNUAL MEETING OF THE STATE BOARD OF AGRICULTURE.

DECEMBER 3, 1851.

This body, together with the delegates from the county agricultural societies throughout the State, assembled at 2 o'clock, P. M., in the Senate Chamber, and were called to order by M. L. Sullivant, Esq., President of the State Board of Agriculture.

The act authorizing the organization of the Board, was read by J. G. Gest, Recording Secretary, after which the counties were called in alphabetical order, and the following gentlemen presented their certificates as delegates :

Ashland	John Scott.
Champaign	William Vance.
Clark and Madison	Alexander Waddle.
Clermont	Joseph McConnell.
Clinton	Paul H. Vandervert.
Coshocton	Charles F. Sangsten.
Crawford	John W. Musgrave.
Cuyahoga	A. McIntosh.
Delaware	Nathan Dustin.
Erie and Huron	Philo Adams.
Franklin	Samuel Medary.
Geauga	D. Taylor.
Greene	Walter Parry.
Guernsey	G. Lofland.
Hardin	J. K. Goodin.
Jackson	W. W. Mather.
Jefferson	George McCullough.
Licking	P. N. O'Bannon.
Logan	Wm. Lawrence, J. Smith.
Lorain	B. C. Perkins.
Mahoning	Asa Baldwin.
Medina	Julius S. Pritchard.
Miami	Asa Coleman.
Monroe	John Davenport.
Muskingum	H. J. Cox.
Perry	Jesse Thomas.
Pickaway	Thomas Huston.
Pike	O. J. Phelps.
Portage	David McIntosh.
Preble	Daniel Lesh.
Ross	William M. Anderson.
Scioto	L. Moss.
Seneca	George Sprague.
Stark	John S. Cock.
Summit	N. W. Goodhue.
Tuscarawas	S. D. Harris.
Union	Joshua Judy.
Warren	Joseph Anderson.
Wayne	J. Johnson.

The Corresponding Secretary of the Board read his report for the last year. He also read an elaborate and interesting report on the nature and general character of the soils of Ohio generally ; and their adaptation for certain crops in some of the counties. Also, general remarks on different soils of Ohio, and special ones on the soils in the counties from which specimens had been sent for analysis.

The Treasurer's Report shows the cash receipts to amount to the sum of.....	\$16,257 53
Cash expenditures	17,572 08
Leaving a cash deficit of	\$1,375 55
The outstanding debts due the board, and assets, amount to	6,344 47

Votes of thanks were returned to the members of the State Board, and particularly to the Executive Committee, for the able manner in which they had discharged their duties.

A special vote of thanks was also tendered to the President, M. L. Sullivan, and to the Treasurer, Col. S. Medary.

A motion was made to go into an election of five members of the Board, at 7 o'clock this evening—carried.

Considerable discussion was had concerning the proper distribution of members of the Board, in different sections of the State.

Gov. Trimble said, in reply to remarks which he had heard made, that the south portion of the State was opposed to holding the next State Fair at Cleveland. He denied that this was the case ; he expected the next Fair to holden in Cleveland, and desired nothing else.

Mr. Gest said he was aware that insinuations had been made that the members of the Board were opposed to holding the next Fair in Cleveland. This charge was false—the members of the Board had never expected anything else, and they did not desire any other result.

The following gentlemen were named as candidates for election as members of the State Board :

Wm. Case, of Cleveland ; Wm. Lawrence, of Bellefontaine ; L. R. West, of ——— ; Krastus Spencer, of Geauga ; J. T. Pugsley, of Fayette ; James C. Ladd, of Jefferson ; Judge C. Musgrave, of Crawford.

The Board adjourned to meet again at 7 o'clock, P. M.

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EVENING SESSION — SEVEN O'CLOCK.

The Convention of Delegates was called to order by the President, and proceeded to business.

After the Secretary had called the roll, the Convention proceeded to ballot for five members of the Board, to serve for two years.

Mr. H. J. Cox, in addition to the nominations already made, nominated Philo Adams, of Erie.

Messrs. Waddle and Anderson were appointed to act as tellers.

The following gentlemen were elected members of the State Board of Agriculture for two years, viz :

M. L. Sullivant and S. Medary, of Franklin county ; Wm. Case, of Cuyahoga ; P. Adams, of Erie ; and R. W. Musgrave, of Crawford.

Mr. Case, one of the members elect, being called upon for a speech, arose and returned his sincere thanks for the honor conferred upon him.

Dr. Coleman introduced a resolution calling upon the State Board to discontinue the office of State Chemist and Geologist.

Mr. Mather remarked that he had not been able, in consequence of the pressure of office duties, to devote as much time to the collection of soils as he had wished. Several counties had applied for the collection and analysis of their soils that he had not been able to collect. He had made all the investigations into the subject that were required, and now, as soon as a laboratory should be provided for, soils could be analyzed. These investigations had resulted in a conviction that the modes of analysis ordinarily pursued, were far from giving all the information that the farmer required—that they were too partial—that they neither gave the ultimate composition of the soil to *show* what was in reserve for future ages, nor all the parts that were now in the soil, in an available condition for the present use of growing crops, by the solvent action of substances in the soil itself—that the methods of analysis thus far used for the analysis of the soils of Pike county, although far more laborious and more expensive than the methods ordinarily followed, may be relied on as affording information and results available to the farmer more than any that have preceded. Profs. Hays and Wells are entitled to the credit of the new methods of analysis now proposed, and Mr. Mather felt that the analysis of the soils of Ohio, carried out as they had been in the case of Pike county, would be a great public benefit, and he felt entire confidence in recommending that the intentions of the Ohio State Board of Agriculture, at their public meeting, be carried out by the Board, or by action of the Legislature, and that he felt confident the results would be satisfactory to all who examined into the subject.

Dr. Coleman remarked that he had no fault to find with the gentleman who filled the office, but that he deemed the office itself unnecessary. He read from an essay his views in regard to soils and their improvement. His essay, although not distinctly heard by most of the delegates, is deemed an able production, and well worthy of being perused by every farmer in Ohio.

At the close of his essay, sundry reasons for the uselessness of the analysis of soils are enumerated. All that are of any importance are capable of a satisfactory disproof, and others not really bearing on the subject are admitted.

Mr. Harris hoped this resolution might not prevail. He was satisfied that great good had already resulted to the cause of agriculture, elsewhere, from chemical

analyses of soils and plants; and that the State Board ought, in some form, to continue the work, to which they were fairly committed, until the constituents of the soils and plants of Ohio were understood. In addition to what Prof. Mather had presented from Prof. Wells, much had been done by a private individual of our State—Billius Kirtland, of Poland—on his own account, in chemical analyses, which, if properly attended to, and the pursuit followed up, would result in great advantage to the cause of scientific Agriculture.

He thought it was now evident, from the tenor of Prof. Mather's report just read, that the duties of that office had been ill-arranged in the outset, and that the results are not what had been anticipated; but was desirous that some plan of operations should be adopted by which the original intentions of the Board might be effectually carried out, as he should be sorry to see the project hastily abandoned.

The resolution was then withdrawn.

Mr. Lawrence offered the following resolution:

Resolved, That the State Board of Agriculture be requested to petition the next General Assembly for the establishment of a Bureau of Statistics and Agriculture, under the direction of the State Board of Agriculture. Also, to petition Congress for the establishment of a similar bureau in connection with the General Government. Adopted.

Mr. Smith, of Logan, offered a resolution requesting the Legislature to adopt measures for securing uniform and equitable rates of transporting agricultural products on the railroads and canals of this State.

In advocating this resolution, Mr. S. read a paper showing that the Mad River and Lake Erie Railroad Company charge much higher rates per mile for freight, from Bellefontaine to Sandusky, than from Dayton to the same place; and similar injustice was done to his county in sending freight to Cincinnati.

The resolution was further advocated by Messrs. Gest and Lawrence.

Mr. Coleman said a like discrimination was practiced on our public works in favor of particular places.

Mr. Cox stated that freight on wheat, on the canal from Newark to Cleveland, was less than from Massillon to Cleveland; and said he supposed this was done to compete with the railroad from Newark to Sandusky, and the difference on the Mad River road was made to compete with the canal to Toledo.

Mr. Medary said he was glad that this subject was introduced, and he would use his influence to have the evil remedied.

The resolution of Mr. Smith was adopted.

SECOND DAY.

Governor Trimble offered the following:

The delegates from Ohio Agricultural Societies, assembled in Columbus, according to law, on the 3d day of December, 1851, respectfully suggest to the State Board

of Agriculture, now in session, the propriety of making application to the next General Assembly, for the appropriation of a sum sufficient to procure a tract of land suitable, and upon which to make an experimental farm; and, if the State Board approve this suggestion:

Resolved, That the said Board, by memorial, or through their President, urge upon the consideration of the Legislature, the propriety of removing the Institution for the education of the deaf and dumb to said farm, and of making provision for the instruction of its unfortunate pupils in the art of husbandry; such pursuit being more congenial with their unfortunate condition, and for which they generally manifest a strong preference, when left to choose an occupation for themselves.

Gov. Trimble said, in support of his resolution, that in his opinion, it was worthy of consideration, and though the Legislature might not assent to it, still the subject would be brought before the people. He was perfectly willing it should be laid upon the table.

Mr. Goodhue, of Summit, said he was glad Governor Trimble's resolution had been introduced—desired that a full discussion of the subject should be had at this time. It proposed a very important improvement—thought an experimental farm, under the supervision of the State Board, a very desirable object to be attained. The expense incurred in its purchase and preparation, would be a good investment. It would subserve a double purpose, in securing additional prosperity to the industrial interests of our Commonwealth, and in aiding the cause of humanity by connecting the Deaf and Dumb Asylum with such an enterprise, as it was consistent with the feelings and for the interest of the pupils to be in the open air with the largest liberty for the eyes, rather than to be shut up in work shops and confined to the city.

Mr. Cock also spoke in favor of the resolution and its adoption. There was great ignorance on the subject of Agriculture, and he was in favor of the chemical analysis of soils, already commenced. He was not willing to back out from that enterprise.

Mr. Smith, of Logan, favored the suggestion. The sciences of Chemistry and Geology had to be brought to a good degree of perfection, before they could be applied to agriculture. It was necessary to have some plan to bring these subjects to bear upon the subject of Agriculture, and by an experimental farm it could be done.

Mr. Gest was opposed to the connection of the Deaf and Dumb Asylum with such a farm. The object of such a farm would be to educate farmers; and its benefits should be to those who are in possession of all their faculties, that they might be able to receive and communicate in the readiest manner, the knowledge there obtained.

As to the experimental farm, he thought our system of government, and our modes of policy were not adapted to conducting such a farm successfully. He was opposed to *class* institutions which separated and kept separate the different portions of our people. He was in favor of establishing a professorship in our State Colleges, devoted to Agricultural Chemistry, where the lectures should be free, and the students could associate with other classes of students.

Mr. Harris was in favor of such an institution as that proposed, and of the connection of the Deaf and Dumb Asylum with it. It might be started on a small scale, and increased as circumstances should warrant.

Mr. Springer said there was no institution in the State where farmers can obtain the education they desire. Such an institution was needed, and as this resolution was merely suggestive, he hoped it would pass, and thus bring it before the people, and let the Legislature take such action upon the subject as they deem best.

Col. Medary was glad the resolution had been introduced. He was a Trustee of the Deaf and Dumb Asylum, and had been urging upon his brother Trustees the propriety of removing this Institution upon a farm. They had found it difficult to make the scholars learn mechanical trades. It is different with the blind—they cannot see, and do not desire to go about. They can also converse while engaged at their work. The deaf and dumb cannot hear each other's conversation, and consequently are not contented to remain confined in a shop. When the deaf and dumb leave the Institution, they almost invariably go upon farms.

Col. M. read from a report of the Directors of the Deaf and Dumb Asylum of Indiana. There the Superintendent found it difficult to keep the scholars out of the garden, so great is their fondness for agricultural pursuits. He was in favor of petitioning the Legislature to sell the Deaf and Dumb Asylum in this city, and was in favor of purchasing a farm, though he did not think the Legislature would connect with it an agricultural school for others than the pupils themselves.

Gov. Trimble replied to Mr. Gest. He had, in a report of this Board, some years ago, recommended the establishment of a professorship, in our State Institutions, but the Legislature did not approve of it, and he thought it would have been useless if they had. These learned professors did not generally sympathize with this subject. The matter must begin with our common schools. The definition of terms must there be learned, so that lectures on chemistry and geology could be understood. He thought a tract of land could be purchased near the city, if the State did not already own such a tract, where the Deaf and Dumb Asylum could be located and made the nucleus of an experimental farm. The objection of cost could thus be disposed of. At a proper time an agricultural professorship could be established, and its benefits secured.

Mr. Gest thought this body should confine itself to its legitimate business, and not seek to take charge of the Deaf and Dumb, and the Lunatic Asylum, or the Penitentiary. Leave these institutions to the proper Directors, and teach scientific acquisitions to those who can talk and hear. As to professorships in our State Institutions, he thought they could succeed; other institutions were establishing them in the East. And the principles of Chemistry and Geology could as well be acquired there, as in an institution established for that special purpose. He was opposed to separate and exclusive education in any profession.

An amendment was offered by Judge Cox, which prevailed; and the resolution passed as follows:

The delegates from County Agricultural Societies, assembled at Columbus, according to law, on the 3d day of December, 1851, respectfully suggest to the State Board of Agriculture, now in session, the propriety of making application to the next General Assembly, for the appropriation of a sum sufficient to procure a tract of land suitable, and upon which to make an experimental farm, and if the State Board approve the suggestion, that said Board petition the Legislature to carry out said proposition.

Judge Cox, of Muskingum, offered for adoption the following resolution:

Resolved, That the State Board be requested to take into consideration the expediency of instituting a State Horticultural Committee, to meet in the city of Columbus at stated periods, to examine fruits and vegetables of a perishable nature, with a view to make a report, and recommendation of premiums at the annual Fair.

Several gentlemen spoke in favor of the resolution, and it was adopted.

Mr. Perkins offered the following resolution, which was adopted:

Resolved, That we petition the Legislature, through our honorable Board, to pass a uniform tax on dogs throughout the State.

Mr. Lawrence offered for adoption the following:

Resolved, That the State Board be requested to complete the plan for the formation of a National Agricultural and Industrial Association, recommended by the Convention of Delegates in December last. And that a committee of three be appointed to co-operate with the Board in preparing said plan.

Which, on motion, was adopted.

On motion, one copy of the bound Agricultural Report was voted to each member of the Convention present.

Mr. Vandervort offered the following:

Resolved, That this Convention petition the Legislature to pass a law granting the members of the State Board of Agriculture a reasonable compensation for the time necessarily spent in attending to the duties of said Board.

Passed.

The Convention then adjourned *sine die*.

MEMORANDUM!

AGRICULTURAL ROOMS,
December 4, 1851.

The Board met, and organized for the year 1852, by the election of MICHAEL L. SULLIVANT, President, SAMUEL MEDARY, Treasurer, and J. G. GERT, Recording Secretary.

A large amount of business was done by the Board, but as the proceedings in detail belong properly to the next annual report, they are not inserted.

The name of Fergus Anderson, Esq., who represented Butler county, at the annual meeting of delegates from county societies, was inadvertently left out of the list on page 29.

TREASURER'S REPORT.

S. MEDARY, in Account Current, as Treasurer, with the Ohio State Board of Agriculture.

DEBTOR.

To balance from last year's settlement	\$2,649 84
To cash on sales of lumber, Cincinnati, O.	488 59
To cash of estate of D. Lapham	200 37
To cash from State of Ohio, for 1851	1,681 22
	<hr/> \$5,020 02
To cash from city of Columbus, subscriptions, viz :	
From Wm. A. Platt	\$73 00
From L. Buttles	do 100 00
From B. Blake	do 401 00
From proceeds of checks paid at maturity	1,716 00
	<hr/> 2,290 00
To cash from P. N. White, on account of lumber sold, Co-	
lumbus, Ohio	\$217 20
To proceeds of notes paid at maturity, for lumber sold, Co-	
lumbus, Ohio	601 20
	<hr/> 818 40
	<hr/> \$8,128 62
Cash from sales of tickets and badges, at Second Ohio State Fair, held	
at Columbus, Ohio	8,209 04
	<hr/>
Total receipts	<u><u>\$16,337 66</u></u>

S. MEDARY, Treasurer, in Account Current with the Ohio State Board of Agriculture.

CREDITOR.

1850.			
December	7.	By cash to William Gregory	\$54 38
"	15.	By cash to W. W. Mather, contingent	25 00
"	15.	By cash to W. W. Mather, salary	83 33
"	31.	By cash to Livingston, Fargo & Co., (Express)	22 00
			<hr/>
			\$184 71
1851.			
January	7.	By cash to W. W. Mather, contingent	50 00
February	5.	By cash to M. L. Sullivan, do. (Ex. Com.)	1,000 00
"	16.	By cash to M. B. Bateham	42 00
"	16.	By cash to J. T. Pugsley	34 00
"	16.	By cash to C. Springer	35 00
"	16.	By cash to S. Holloway	10 00
"	16.	By cash to J. M. Edwards	33 00
"	16.	By cash to F. R. Elliott	20 50
"	16.	By cash to estate of D. Lapham	50 00
"	16.	By cash to S. Medary, for printing	12 00
"	16.	By cash to F. R. Elliott	20 00
"	16.	By cash to J. G. Gest	76 73
"	16.	By cash to M. L. Sullivan	87 50
"	16.	By cash to J. T. Pugsley	12 00
"	16.	By cash to A. Watts	11 50
"	16.	By cash to D. Holloway	21 00
"	16.	By cash to A. Trimble	15 50
"	16.	By cash to C. Springer	14 00
"	16.	By cash to S. Medary	24 00
"	25.	By cash to Luther Tucker	18 75
"	25.	By cash to Simpson Jones	50 00
			<hr/>
			\$1,822 19
April	4.	By cash to W. W. Mather, salary	150 09
"	12.	By cash to Columbus Gas Company	24 09
"	17.	By cash to Coleman & Reilly	400 00
			<hr/>
			\$2,396 28
May	14.	By cash to W. W. Mather, salary	83 33
"	15.	By cash to W. W. Mather, contingent	50 00
			<hr/>
			\$2,529 61
June	4.	By cash to W. W. Mather, salary	83 33
"	17.	By cash to T. Stockton, Agent for Ins.	8 50
"	25.	By cash to W. W. Mather, contingent	50 00
"	30.	By cash to Field & Adams	299 76
			<hr/>
			\$2,971 20
July	5.	By cash to Butties, Comstock & Co.	314 26
"	10.	By cash to W. W. Mather, contingent	40 00
"	10.	By cash to W. W. Mather, salary	83 33
"	15.	By cash to Benjamin Blake	20 00
"	21.	By cash to Benjamin Blake	30 00

1851.

July	25.	By cash to Blynn & Baldwin	\$918 61
"	26.	By cash to W. W. Mather, contingent	50 00
August	9.	By cash to H. N. Prentiss	41 00
"	13.	By cash to M. L. Sullivant	500 00
"	20.	By cash to W. W. Mather, salary	125 00
			<hr/>
			\$5,093 40
Sept'r	2.	By cash to Livingston's Express Co.	1 50
"	4.	By cash to Blynn & Baldwin	45 00
"	13.	By cash to Butties, Comstock & Co.	500 00
"	15.	By cash to S. D. Porter	12 00
"	15.	By cash to Dr. I G. Jones	50 00
"	15.	By cash to John Barbee	10 50
"	17.	By cash to S. M. Whitney	50 00
"	17.	By cash to L. D. Porter	37 50
"	18.	By cash to E. Hall	22 00
"	24.	By cash to S. M. Whitney	50 00
"	27.	By cash to Newark Band	150 00
"	27.	By cash to Police bill, (2d Fair)	367 95
"	27.	By cash to ticket office expenses	80 00
			<hr/>
			\$6,469 85
October	1.	By cash for postage	95 02
"	3.	By cash to D. T. Woodbury	12 69
"	3.	By cash to John M. Edwards	25 00
"	3.	By cash to Business Office	244 50
"	3.	By cash to Butties, Comstock & Co.	1,500 00
"	4.	By cash to Ohio Stage Company	50 00
"	4.	By cash to Miss A. Mather	5 50
"	4.	By cash to M. L. Sullivant	1,000 00
"	6.	By cash to American Hotel	10 00
"	7.	By cash to Alexander E. Glenn	33 00
"	10.	By cash to Thomas O'Harra	80 00
"	14.	By cash to George E. Walcutt	31 80
"	20.	By cash to Jacob Myers	12 00
"	24.	By cash to George Riordan	10 00
"	25.	By cash to Xenia Torch Light	79 62
			<hr/>
			\$9,658 98
Nov'r	1.	By cash to Blynn & Baldwin	2,197 44
"	4.	By cash to W. W. Mather, salary	200 00
"	5.	By cash to P. N. White	46 00
"	7.	By cash to Scott & Bascom	348 30
"	7.	By cash to Otto Onken, Engraver	142 50
"	7.	By cash to Martha Winan	2 00
"	7.	By cash to H. N. Prentiss	14 50
"	8.	By cash to P. T. Snowden	53 39
"	10.	By cash to James Lennox	48 00
"	11.	By cash to Livingston, Fargo & Co.	3 00
"	12.	By cash to S. M. Whitney	250 00
"	13.	By cash to Lucien Butties	120 88
"	13.	By cash to Robert Robinson	11 50
"	14.	By cash to George Fisher	11 00
"	14.	By cash to Kilbourne, Kuhn & Co.	2 78
"	14.	By cash to Kilbourne, Kuhn & Co.	236 55

1851.			
Nov'r	14.	By cash to Kilbourne, Kuhn & Co.	\$14 13
"	14.	By cash to Ambos & Lennox	176 50
"	14.	By cash to J. H. Riley & Co.	96 19
"	14.	By cash to Otto Onken, Cincinnati	99 00
"	14.	By cash to Watson & Co.	64 17
"	15.	By cash to Edward Evans	32 50
"	15.	By cash to R. M. Peckham's bill	1,728 14
"	18.	By cash to George M. Swan	3 00
"	19.	By cash to W. L. Miner	38 16
"	21.	By cash to Jacob Myers	32 72
			<u>\$15,631 33</u>
Amount paid for Premiums awarded in 1850			118 00
Amount paid for Premiums awarded in 1851			886 00
			<u>\$16,635 33</u>
December	1.	Paid premium	5 00
"	1.	Paid cash to Weaver & Carter	11 90
"	1.	Paid cash to Wetmore & Remick	25 16
"	1.	Paid cash to S. Medary, rent	100 00
"	1.	Paid cash to S. Medary, printing, &c.	696 05
			<u>\$17,473 44</u>
"	2.	Paid cash to G. W. Heyl	7 21
By counterfeit money taken in at Ticket Office			25 00
			<u><u>\$17,505 65</u></u>

S. MEDARY, *Treasurer,*
O. State Board of Agriculture.

ASSETS.

Amount of lumber, unsold, which will probably amount to—		
One hundred and fifty feet shed		\$250 00
Carriage drive		100 00
Loose lumber		200 00
		<u>\$550 00</u>
Two tents, valued at	\$1,100	
Probable amount of cash in hands of Executive Committee, about	300	
		<u>1,400 00</u>
		<u>\$1,950 00</u>
Amount due on city subscriptions, and on account of lumber sold		\$1,080 80
Gulic, Thompson & Horr's note	600 00	
		<u>1,680 80</u>
		<u><u>\$3,630 80</u></u>

III.

OHIO STATE FAIR.

CIRCULAR OF THE EXECUTIVE COMMITTEE.

To the Farmers and Manufacturers of Ohio :

The second annual Agricultural Fair of the State of Ohio, is near at hand. The committee who have been charged with the duty of making the arrangements to give efficacy to this great enterprise have now discharged their duty. The Fair grounds, beautiful in situation, are tastefully laid out with ample and convenient walks and carriage-drives. Large and commodious halls are erected for the reception of manufactured articles, the productions of our mines, fields and forests, as well as for specimens of the fine arts and objects of taste. Steam power is gratuitously furnished for machinery requiring such aid. Food, water, and comfortable and ample provision, in the way of sheds and stables, have been provided for horses, cattle, hogs, sheep and poultry, at the expense of the Board. And most extensive arrangements have been made for feeding the great multitude when on the grounds. Our hotels are large and capacious, and whatever they lack in accommodation will be made up by the well-known hospitality of the citizens of Columbus, who have generously resolved to open their houses and welcome the strangers who visit us on this occasion.

We are cheered by the very numerous entries of horses, sheep and cattle, by hundreds already made, as well as the great variety of valuable machinery and useful articles. May we not then confidently appeal to the State pride of our citizens, to every man and woman engaged in agriculture, horticulture and manufactures, to lend a helping hand and unite *their efforts with ours*, in giving effect to the great object of the exhibition. There are hundreds and thousands of our farmers, mechanics and others, possessing articles of their own production, specimens of their own skill and industry, of which they might be justly proud. Bring or send these here ; do not be deterred by the idea that others will send better, and that yours are not worthy of exhibition. We wish a full and fair representation of all interests in every department, to exhibit the progress of our people. Let no one for a moment suppose that he or she can do nothing to aid this enterprise, but remember that it is the *aggregate zeal of all* that gives life and energy and spirit to the honorable and valuable competition of an agricultural exhibition. In this, there is no private and illegitimate feeling to gratify ; no one has any personal

motive to subserve. The object is solely to elevate the character and stimulate the industry of our people. By thus associating and communing together, we shall secure those lights of knowledge which shall here be shed by the practical experience of others. Especially shall we know the vast improvements and progress that are being made every day in the arts, sciences, agriculture and manufactures within our borders. Our enterprise promises to afford you much pleasure as well as profit ; to give a better and more enlightened direction to your labor, and higher and more profitable results.

In union there is strength, as well moral as physical. We have done our part : with you it now remains whether, by your contributions, the exhibition shall be one alike creditable to our people and the State.

M. L. SULLIVANT,
ARTHUR WATTS,
J. T. PUGSLEY,

Executive Committee O. S. B. Agriculture.

STATE BOARD AGRICULTURAL ROOM,
Columbus, Sept., 1851.

From the Ohio Statesman, September 24.

SECOND ANNUAL AGRICULTURAL FAIR OF OHIO.

WEDNESDAY, FIRST DAY OF THE EXHIBITION.

We have had but little opportunity for the particular inspection of any one article or classification. Any one, however, no matter how rapidly he might glance over the various specimens in the several halls, will be at once struck with an impression of excellence in every department. Whether in the department for the exhibition of implements of husbandry, in Power Hall, the specimens of Domestic manufactures, horticulture, farm products, or live stock, no one can spend half an hour without perceiving that the mechanical and agricultural mind of Ohio has come immediately and powerfully within the influence of the spirit of modern improvement. Practical Industry and Ingenuity, each guided by a highly cultivated and growing Intelligence, are visible throughout. Science has written her signature plainly upon every industrial interest of the State, in blended colors of utility and taste.

We regret that we cannot distinguish every meritorious article introduced, with a particular and complete description. The reading people would derive more instruction and enjoyment from our columns, thus filled for the time, than from any other species of matter we could lay before them. It would afford us a pleasure, no less profound and lively, to be able thus to present, as it were, a complete miniature of Ohio skill, genius and taste. But such a task is far beyond the capability of a single pen or a single journal. We shall, however, attempt, as our limited time and space, and other varied enjoyments may allow, to speak of prominent specimens of each class of articles, selecting such as may be regarded as representatives of the class to which they belong.

Power Hall comes first under notice, as you enter the Area, and is already the receptacle of a large collection of enginery and machinery. Two prominent features here presented are the Steam Engines introduced both for exhibition, and for the propulsion of other kinds of machinery for the occasion, by Messrs. Ambos & Lennox, and by J. Ridgway & Co., both manufactured at the foundries of these firms in this city. A critical observer will not fail to be at once impressed with their exquisite construction and simplicity.

That of Messrs. Ridgway is peculiar and somewhat novel. It occupies a space of not more than 49 square feet, and is designed for the Muley saw mill, the turning shop and similar uses. The cylinder is 8 inches in diameter, with 12 inch stroke, making from 250 to 350 revolutions per minute. It will saw as high as 10,000 feet per 12 hours, averaging in the hands of a competent engineer, 7,000 feet per day. It is strong, compact and durable, and most easy of access to every part. The pitman of the saw is attached to the mainshaft by a crank on the oppo-

site end to the engine crank. The power of the engine is that of 15 horses. The cost is about \$400, a mill complete not to exceed \$1200. This engine is used very extensively in Canada, and generally in Northern Ohio.

The engine is to be seen immediately at the west end of Power Hall. It works vertically. Its system of construction is one combining utility with great force and symmetry. We have not yet been able to obtain an accurate statement of its operation and power, but any one can see that for use in machinery requiring great power and economy of room, this splendid work possesses every degree of adaptation. We shall to-morrow, if possible, in the course of continued notices of specimens for exhibition, present our readers with a report of its mode of action, capacities, power and purposes. The gentleman having it in charge, Mr. James Lennox, has been too busy acting as superintendent of the Hall, to furnish us with materials for an accurate description for this day's paper. We defer now further special notices of articles until our columns are freed from the pressure occasioned by our report of the very numerous entries for exhibition.

10 o'clock, A. M.

For more than two hours, the concourse between the city and the arena of competition has been very large, and rapidly increasing. From High street, as far as the eye can discern westward, all is a scene of carriages, buggies, wagons, horsemen and footmen. Vivacity and excitement are visible in every face, and no one seems free from the general bustle and animation. Every officer upon the ground is kept constantly upon the run, in assigning the various specimens entered to its appropriate position, and in the exercise of universal vigilance for good order and system. Within the large enclosure, ranged in stalls, pens, coops, halls, booths and rings, crowded about the gates, and along all the roads and streets, are seen cattle, horses, sheep and dogs, hogs, poultry, farm implements, products of the dairy, manufactures, specimens of the fine arts, and every variety of rare and beautiful articles of horticulture. We have heard many say that in every department, the Exhibition would now far exceed the enumeration of articles presented at the State Fair of last year.

The business offices are pressed upon literally by hundreds, all eager for the purchase of season tickets, and for the entry of articles. The clerks in the office of entry, are unable, with the utmost exertion possible, to answer the wants of the throng at their windows, and the same excess appears at the Treasurer's office. In consequence of the increasing applications of ticket holders for entry, the Board have been compelled to extend the time for this privilege, until the close of the day.

CLOSING SCENES OF THE STATE FAIR.

The final ceremonies of the Second exhibition of Ohio skill and industry, were eminently in character with the occasion, and well calculated to add to the steady enthusiasm prevalent from the first hour. About noon, after the regular proceed-

ings, as announced in the programme, were disposed of up to that point, the owners of horses and cattle arrayed the most select specimens of their stock on exhibition in procession, preceded by the splendid brass band from Newark, and followed by an immense throng, marched round the avenues of the grounds. Although about this time the rain commenced falling, the interest of the occasion was so great that few seemed to regard shelter, in the general anxiety to witness so magnificent and gratifying a spectacle.

Passing about the grounds for an hour or so, looking at a few horses, or a few cattle, for a moment here and there, subject to interruptions and distractions, from the busy and animated crowd, it was not possible for one man to realize the united extent of the live stock exhibited — that part of it composed of horses and cattle. Such hindrances to a correct appreciation of these important features of the occasion were greatly obviated by the procession. We thought we had seen every fine horse and every splendid cow, heifer and steer on the ground, and so we had, during the earlier portion of the fair. But we gathered a much clearer and more satisfactory conception of the comparative merits of each, from the *cortege* of yesterday.

About 2 o'clock on Friday, the committee who waited on Col. ALLEN, the orator of the day, to escort him to the grounds, with that gentleman proceeded to the stand. Although the rain continued to fall quite freely, a very large and attentive audience assembled to listen to Mr. ALLEN's address. After an eloquent prayer, Mr. ALLEN rose. He alluded to the unfavorable circumstances under which he appeared before them, and stated in advance that he would not trespass upon their indulgence, by keeping them in the rain, to listen to a regular address. Although he had cast in his mind, a discourse upon a plan of commensurate extent with the occasion, and with the numerous and important subjects connected with the agricultural and kindred interests of the State, he must now lay that address aside, and would detain the audience but a few moments.

He thanked the State Board for the flattering compliment bestowed upon himself, by designating him for the delivery of the address upon this great occasion. In behalf of every friend of the cause everywhere, he thanked the people of Franklin county and of the Capital City, for their liberality and energy in aiding on the preparations for this exhibition. He thanked the projectors of the grounds, and the artisans employed in executing their plan, for their taste, ingenuity and energy, as manifested by the completeness and vastness of the various arrangements. And more than all he cordially thanked the farmers and mechanics of the State, for so magnificent an array of the products of their skill and of their soil. He said that it was these evidences of prosperity and advancement, of which a lover of the State would be most proud. He (Mr. A.) had said on a former occasion, that you might draw a line around no two millions of people of the civilized world, so surrounded with advantages calculated for the highest physical and moral development, happiness and comfort of man, as those enjoyed from nature and from art,

by the people of Ohio. He said so now! He saw before him and around him, within convenient observation, more conclusive evidence of the fact, than he had ever seen before. He saw it in the specimens of taste, skill, frugality and industry, composing the exhibition, but most clearly he saw that evidence in the orderly and upright deportment of the people, and in the light of cultivated intelligence beaming all around him from every countenance.

Mr. A. spoke in terms of gratitude and profound appreciation of the numerous modes in which the women of Ohio had contributed to the interest, the instruction, and the universal enjoyment of this occasion. He alluded to the incalculable benefit in every desirable manner, which these exhibitions must produce for the present and the future upon the community in general. We now see and feel the advantageous effects of them upon our own people, in the increasing comfort and happiness achieved by the stimulus which they lend to every faculty of men and women. Their future fruits must be much greater. He hoped to see the day at no great distance of time, when Industrial Exhibitions would become national, when we would hold one this year in the Great West, next year in the South, and another year in the North and East. No better mode of cultivating fraternal friendship among the various sections of the confederacy could be established. We see the operation in this regard among the people of our State, and he ardently hoped the day was drawing near, when by projecting such festivities upon an adequate scale, their glorious and happy results would be seen and felt in every part of the American Republic.

Mr. Allen closed with an apology for having detained the audience so long in the rain. His remarks were listened to with much attention, and exhortations of "go on," "go on," were heard from all parts of the audience.

It was plain that however copiously the shower might come down, the people would not depart without another speech. Senator Douglass being on the stand, great anxiety to hear him was visible on every hand. Mr. Sullivant accordingly introduced him to the audience.

As we have not been able to present any thing more than an imperfect sketch of the remarks of Mr. Allen, we have been equally unable to obtain material for more than that of the interesting address of Mr. Douglass. Although we enjoyed tolerable opportunity to hear, we at the same time received full benefit of the rain, and were therefore unable to take notes of the speeches.

The appearance of Mr. Douglass on the stand was received with unusual marks of favor and pleasure. From the first moment of his arrival at our city, a general desire has been manifest to see and hear him. He commenced his remarks by stating that he had just returned from the State Fair at Rochester, at which he had delivered the regular address, and as that address was about being published in Columbus, he would feel more free to excuse himself from detaining the audience in the drenching rain, with more than a very few words.

He had very lately seen the assembled skill, ingenuity and art of the Empire State of the East, and he now beheld before him, on a scale of exhibition truly magnificent, a similar representation of the Empire State of the West. He could say, that while there were divers points of superiority in the former exhibition, not immediately connected with agriculture, in which the people of New York vastly excel, yet so far as the substantial departments, such as cattle and horses, were concerned, the farmers of Ohio far surpass their brethren of New York. As a Western man, and proud of the agricultural progress of the Great West, he was free to say, our people had given an illustration of the resources of their ingenuity and of their soil, which might boldly challenge comparison with any people and country on the globe.

Mr. Douglass then compared the people of this country with those of Europe, alluding to various elements of labor, manufacture and production. America, he said, embraces almost every variety of produce known to the world: Stretching from the tropics to the north temperate, scarcely any portion of the civilized globe boasts of fruit, herb, animal or flower, which could not be produced or cultivated in some portion of the United States. We have a soil comparatively new, and inexhaustibly fertile. But a small portion of it is under cultivation, while that which is, may be rendered capable, by proper tillage, of producing far more than it does at this time. What man among you all, asked Mr. D., is there, who could not raise twice the quantity of agricultural produce or subsist far more live stock from his land, than he does at this time? We have these advantages which Europe does not enjoy, and which she becomes less able to attain every year.

Europe is limited in soil, and yet is compelled to maintain an excess of population; while America, on the other hand, reverses the proportion, and contains more land than she has of laborers to cultivate it. This opens the door to invention in our country, while it is closed in Europe. Agricultural machinery in this country is an auxiliary of manual labor, while in Europe, it is its worst foe. Here we have far more than land enough to subsist our people, and it can be converted into permanent property at a nominal price, within the power of moderate industry, to pay. All agricultural laborers thrown out of employ by the introduction and increase of mechanical facilities, instead of becoming disheartened, are rendered the more sanguine to purchase their own homesteads, when they see they can render it productive in their turn, by the cheap process of mechanical invention. He does not need to fear, should he become a proprietor of the soil, lest the hire of hands should exhaust his profits, for he can acquire all the advantages of mechanical invention. Such inventions, then, instead of throwing a large and meritorious class of men upon the community, absolutely increase not only the amount of actual labor employed, but augment in still greater proportion, the products of that labor, and in that degree widen the area of our population, and enhance the wealth, happiness, greatness, and moral strength of the nation.

Not so with the agricultural and mechanical labor of Europe, said Mr. D. Every machine invented there and brought into use, makes a pauper out of every artisan or operative, with whose hands it dispenses. They are thrown upon society, to be supported in unavoidable idleness, or to starve. While invention is an aid to civilization and its blessings, in our country, it is an agent of barbarism and misery in Europe. The very excess of manual labor there, over agricultural capacity, stands as a barrier to the comparative progress of society. The excess of soil here over the people to cultivate it, is a powerful and sure stimulus to every species of healthful advancement in the people.

With our broad expanse of country, our fertile soil and our universal enterprise, who can predict the destiny and greatness of this people? We can raise the bread-stuffs and provisions to feed the world, and the cotton and the wool to clothe it, said Mr. D. With such vast resources, and such infinite materials to open them up, with our free and happy government, guaranteeing to the yeomanry and the artisan the control of the lands they till, and of the capital they create, there is no height of national and individual prosperity beyond the scope of our reasonable hopes, or the reach of a wise and peaceful employment of our energies.

Mr. Douglass closed his remarks amid loud cheers, and introduced to the audience, Governor Wright, of Indiana. We must again express our regret that we cannot give full and accurate reports of the speeches of these gentlemen, that we were unable to take full notes. The speech of Governor Wright was fraught with argument, wit and humor throughout, and he was often interrupted with the cheers and applause of the people.

He stated that he had just returned from a four day's attendance upon the New York State Fair, and he had been here during the present occasion. He had witnessed assemblages of the people, numbering over one hundred thousand at both places, and he could say that he had not seen at either Fair a single drunken man. People of all parties, and politicians of all parties, had attended both exhibitions, without number, and so intent had they all been upon the greater purposes of the occasion, that he had not heard a single allusion to party politics.

He congratulated the people upon the existence of such a spirit. He was glad to perceive, all over the land, that farmers, mechanics and laborers, were waking up to so deep a sense of their claims upon public consideration, and that they were cultivating so universally, not only sentiments, but habits of temperance and sobriety; that they were showing on every hand a determination to eschew, upon proper occasions, the embittered strifes of parties, except so far as politics were applicable to the promotion of the agricultural and mechanical interests of the country.

But there are phases of this great agricultural movement and "agitation," which must not be overlooked. Farmers are beginning to educate their children in all practical knowledge calculated to inform them of the capacities of the soil, and the products most adapted to its nature and action. In short, the farmers' sons are becoming the learned men of the country, learned in all the philosophy connected with this noble and indispensable avocation.

Governor W. exhorted the people to the cultivation of a generous spirit of emulation and rivalry. He stated that Indiana would have a State Fair at Indianapolis next year, and invited all the people present to come out on a visit, on that occasion! He was frequently interrupted with loud cheers. We were compelled to leave the grounds about the close of his remarks, and can only sketch the close of the meeting from hearsay.

Thus ends the second Annual State Fair, given by the Agricultural Society of Ohio. Ohio is a new State. The Society has been actively organized but a few years. It is yet a proceeding which all our people do not appreciate. Its scope and purposes are not yet comprehended by the classes of whose interests it is the primary organ, advocate and representative. Those classes, notwithstanding the large assemblages which have attended our two exhibitions so far, have not even as yet taken hold of the opportunity afforded for demonstrating all their capacities, resources, products, claims, and necessities. Of these it is the very purpose of the Fair to advertise the world, to ask the consideration and encouragement of general society, and to urge the laboring, inventive and constructive energies of the State to go upon a wider field of action, and into new efforts of discovery, experiment and invention.

Much of this high and grand object has been accomplished, as we have all seen with our eyes. Much more is yet to be done. By the token of our brilliant success so far, may we not hope, aye, we do believe, that the industry and skill of Ohio have but barely passed within the gates of boundless fields of employment.

From the Western Agriculturist.

THE SECOND STATE FAIR OF OHIO.

The Fair is over—its hurry and its bustle; but we can truly and with pride say, that there was no confusion. Many have remarked they did not see a drunken man nor a broken carriage amid the ten thousands that were present. The Fair has passed off with satisfaction and enjoyment to almost all who participated in its varied scenes. The Editor had little opportunity of seeing the different kinds of stock and the numerous products of the household, the manufactory, the farm, the garden, &c.—his duties confined him almost entirely to the business office of the Fair, directing its varied affairs, conferring with the numerous committees and others, and deciding the questions continually occurring, connected with the office.

The Editor witnessed the first day of the Fair at Rochester, N. Y., but could not stay longer, as his duties here required his immediate attendance, after seeing the business part of the Fair carried out practically in New York. The second Ohio Fair is stated to be superior—far superior—to that of last year at Cincinnati, and superior in stock, horses, and sheep, to that of Rochester, N. Y., this year. Floral Hall,

at the Ohio Fair, is said by some, to have been superior to that at Rochester—not, perhaps, so much in the variety and excellence of the articles exhibited, as in the taste displayed in fitting it up. Many compliments have been paid to the ladies of Ohio, for the elegance and fine taste manifested in the arrangements and fitting up of Floral Hall.

Much has been said also, in regard to the arrangement and fitting up of the grounds. They are admirably fitted by nature for the purpose, and the Executive Committee of the Ohio State Board of Agriculture, after spending two days in examining various locations in the vicinity of Columbus, showed their taste and sense of fitness and adaptation for the various requisites for such an exhibition, by choosing the grounds on which the fair was held. No expense has been spared to fit them up so as to accommodate the varied wants of such an exhibition. After arranging all other things for convenience and fitness, Mr. Joseph Sullivant, of Columbus, improved them still more by arranging the carriage ways and avenues, and buildings, and tents, &c., upon the principles of Landscape Gardening, so that every change of position gave a new and varied view. Some ten acres of the grounds are elevated as a terrace, about thirty feet above the general level, and this and some other parts are well shaded by venerable native forest trees, that the axe has never marred—trees that were of mature age before the white man showed his face among them. A few days before the Fair, Rev. Dr. Hoge preached a sermon in this grove—the identical sermon, and in the same place that he had preached forty-five years before;—but how changed the surface of the country—how changed the congregation. Farms have been cleared, towns and cities have grown up around, and not one person that then heard him was now present.”

The list of awards following is made up with much care, and is believed to be correct. It is made up in such form, in separate columns, as to facilitate reference, and gives the class, committee number, and entry number.

1851.

AWARDS OF PREMIUMS

1851.

AT THE

SECOND ANNUAL STATE FAIR.

PREMIUMS AWARDED ON CLASS A.

COM. NO.	NAME OF ARTICLE.	ENTRY NO.	TO WHOM AWARDED.	DOLLARS.
1	Durham bull over three years,	best.-----	Arthur Watts, Ross county-----	30
-	do do	2d -----	Harvey H. Hankins, Clinton county-----	15
-	do do	best.-----	A. Hawkins, Clinton county-----	15
-	do do	2d -----	John Hadley, Clinton county-----	10
-	do do	best.-----	J. O. B. Renick, Pickaway county-----	10
-	do do	2d -----	E. W. Vause, Ross county-----	5
-	do calf,	best.-----	Wm. Harrold, Clark county-----	10
-	do calf,	2d -----	Isaac Hollingsworth, Warren county-----	5
-	Durham cow, over three years,	best.-----	Wm. Harrold, Clark county-----	30
-	do do	2d -----	M. L. Sullivant, Franklin county-----	15
-	Durham heifer, over two years,	best.-----	David Pyle, Clinton county-----	15
-	do do	2d -----	Wm. D. Pierce, Clark county-----	10
-	do do	best.-----	J. O. B. Renick & J. P. Brown, Pickaway co-----	10
-	do do	2d -----	Moses Stedman, Warren county-----	5
-	do do	best.-----	Arthur Watts, Ross county-----	10
-	do do	2d -----	Arthur Watts, Ross county-----	5

The committees also commend highly many other animals in this class, particularly a three years old bull, entered by Jonathan Hadley, of Clinton county, No. 32; a bull calf, by J. & J. Pierce, Clark county, No. 18; a heifer calf, by Mr. Pierce, of Clark; and another by Mr. Renick, of Ross.

PREMIUMS AWARDED ON CLASS A — Continued.

COM. NO.	NAME OF ARTICLE.	ENTRY NO.	TO WHOM AWARDED.	DOLLARS.
2	Devon bull over three years, do do best.....	67	P. Hitchcock, jr., Geauga county.....	30
-	do do 2d.....	35	Chauncey Taft, Trumbull county.....	16
-	do over one year, do do best.....	63	Morley & Co., Lake county.....	10
-	do do 2d.....	28	L. G. Collins, Clinton county.....	5
-	Devon cow over three years, do do best.....	28	L. G. Collins, Clinton county.....	30
3	Hereford bull over two years, do do best.....	76	F. R. Elliott, Cleveland.....	10
-	Hereford heifer over two years, twins, do do best.....	59	John Walke, Pickaway county.....	10
4	No animals entered in this class.			
5	Native and cross cow over three years, best.....	58	Harness Renick, Pickaway county.....	25
-	do do 2d.....	75	M. L. Sullivant, Franklin county.....	15
-	do heifer, two years, best.....	43	S. Adams, Pickaway county.....	15
-	do do 2d.....	68	Harness Renick, Pickaway county.....	10
-	do calf, best.....	37	A. R. Seymour, Fayette county.....	5
-	do do 2d.....	37	A. R. Seymour, Fayette county.....	3
6	Ten yoke oxen from one county, best.....	11	Ross county.....	50
-	do do 2d.....	41	Pickaway county.....	25
-	do yoke over four years best.....	49	Wm. Miller, Pickaway county.....	25
-	do do 2d.....	12	Arthur Watts, Ross county.....	15
-	do under four years, best.....	13	Henry Renick, Ross county.....	20
-	do do 2d.....	64	F. H. Renick, Pickaway county.....	10
7	Pair of fat cattle, best.....	73	J. H. Davis, Ross county.....	20

7	Fat bullock over five years, do do do over four years,	best. 2d best.	12 15 12	Arthur Watts, Ross county Wm. Osborn, Clark county. Arthur Watts, Ross county	25 rec. dis. 20
8	Pair grass fed cattle (for beef) Fat do bullock four years, do do do three years, do do do two years, do do do one year,	best. best. best. best. best.	29 52 54 44 16	John Hadley, Clinton county Jacob Egbert, Warren county M. L. Sullivan, Franklin county Thomas Matthews, Licking county Rollin Mohler, Franklin county	15 8 6 4 3
9	Grass fed fat cow over five years, do do three years,	best. best.	36 40	W. D. Pierce, Clark county J. O. B. Renick, Pickaway county	10 8
10	Milch cow,	best.	7	Adams Stewart, Columbus	20
11	Bull over three years, from other States, best.		62	A. Stevens & J. M. Sherwood, Auburn, N. Y.	20
12	Sweepstakes—bull over three years, do do two years, do do one year, do calf, do cow over three years, do heifer over two years, do do one year, do calf,	best. best. best. best. best. best. best. best.	12 30 78 17 9 26 34 17	Arthur Watts, Ross county A. Hawkins, Clinton county J. O. B. Renick, Pickaway county E. W. Vause, Ross county William Harrold, Clark county David Pyle, Clinton county Moses Steddon, Warren county E. W. Vause, Ross county	10 10 10 10 10 10 10 re. dis. 10

PREMIUMS AWARDED ON CLASS B.

COM. NO.	NAME OF ARTICLE.	ENTRY NO.	TO WHOM AWARDED.	DOLLS.
13	Stallion, 4 years old	47	John Irons, Lebanon, Warren county	30
--	do do	66	A. Sprang, Dayton, Montgomery county	15
--	Brood mare, do	122	Wm. Miller, Pickaway county	20
--	do do	229	J. W. Lomney, Pickaway county	10
--	Stallion, 3 years old,	77	J. D. and W. H. Ladd & Co. and J. C. and A. J. McGrew, Jefferson county	15
--	do do	88	David Taylor, Franklin county	10
--	Filley, 3 years old,	63	Reber & Kutz, Lancaster	10
--	do do	78	Benj. Ladd, Jefferson county	5
--	Stallion, 2 years old,	79	J. D. Ladd & J. C. McGrew, Jefferson county	10
--	do do	11	Stephen Postle, Franklin county	8
--	Filley, 2 years old.	76	W. H. Ladd, Jefferson county	8
--	do do	89	W. L. Miner, Franklin county	5
--	Stallion, 1 year old,	132	James Richie, Clinton county	8
--	do do	172	M. L. Sullivan, Columbus	5
--	Filley, 1 year old,	191	E. Florence, Pickaway county	5
--	do do.	34	Wm. Rarey, Franklin county	3
14	Stallion, 9 years old	61	Crim & Pierce, Lancaster	20
--	do 4 do	37	Moses Seymour, Franklin county	10
--	Brood mare and foal,		No first premium awarded	
--	do do	86	Robert Walcut, Franklin county	10
--	Gelding,	147	Wm. S. Denison, Muskingum county	10
--	No 2d premium offered.			
--	Mares			
--	No 2d premium offered	39	Edward Ricketts, Fairfield county	10

15	Stallion, Stallion, Gelding,	best..... 2d	126 13 253	J. S. Vanatta & Co. Licking county Uriah Stotts, Columbus William Hegler, Fayette county	20 10 10
16	Matched horses. do do	best..... 2d	48 230	Jacob Egbert, Warren county R. Comstock, Franklin county	25 15
17	Gelding, harness do do Gelding for saddle, do do Mare, harness, No premium awarded, Saddle mare No premium awarded.	best..... 2d best..... 2d best..... 2d best..... 2d	43 210 50 38 226 237 2d	William Miner, Columbus, Ohio Samuel Campbell, Pickaway county Jacob Egbert, Warren county L. Flattery, Wayne county A. J. Byerly, Pickaway county James D. Ladd, Jefferson county	10 5 10 5 10 10
18	Jackass, Jackass, Jennet, Jennet, Pair mules, Pair mules, Single mule, Single mule, One year old mule, do do Mule colt No premium awarded.	best..... 2d best..... 2d best..... 2d best..... 2d best..... 2d best..... 2d	186 154 161 115 113 171 114 160 98 97 99 2d	C. R. Caulkins, Delaware county E. R. Ditoe, Perry county J. Pierce, Clark county W. D. Pierce, Clark county W. D. Pierce, Clark county M. L. Sullivan, Columbus W. D. Pierce, Clark county J. Pierce, Clark county R. D. Pogue, Greene county R. D. Pogue, Greene county R. D. Pogue, Greene county	30 15 20 10 20 10 10 5 10 5 8
19	Stallion, 4 years, Stallion, 7 years,	best..... 2d	28 54	L. Hodges, Vermont W. W. Huff, Buffalo, N. Y.	25 15
20	Stallion, 4 years, Mare,	best..... best.....	164 239	John Irons, Lebanon, Warren county Jacob Arnold, Franklin county	Medal. Medal.

PREMIUMS AWARDED ON CLASS C.

COM. NO.	NAME OF ARTICLE.	ENTRY NO.	TO WHOM AWARDED.	DOLL'S.	DISE.
LONG WOOLLED SHEEP.					
21	Best buck over 2 years	90	J. Townshend, Avon, Lorain county.	10	
--	Second do	106	Archibald Stuart, Cincinnati	5	
--	do	76	D. Stoolfire, Hebron, Licking county.		Com'd.
--	Best pen of 5 ewe lambs	3	B. B. Browning, Clark county.	5	
--	Five ewes under 2 years	2	B. B. Browning, Clark county.		Com'd.
MIDDLE WOOLLED SHEEP.					
22	Best buck over 2 years	70	D. Laughhead, Xenia.	10	
--	Second do	77	D. Stoolfire, Hebron, Licking county.	5	
--	Best buck under 2 years	117	George Smith, Vienna, Clark county.	10	
--	Second do	71	D. Laughhead, Xenia.	5	
--	Best pen of 5 ewes over 2 years	72	D. Laughhead, Xenia.	10	
--	do do under 2 years	118	George Smith, Vienna, Clark county.	5	
--	do 5 ewe lambs	73	D. Laughhead, Xenia.	5	
MERINOS AND THEIR GRADES.					
23	Best buck over 2 years	47	A. Hildebrand, Massillon, Stark county.	10	
--	Second do	100	William S. Wright, Granville, Licking county.	5	
--	do	53	A. Winter, Kirkersville, Licking county.	3	Recom.
--	do	14	Charles Button, Franklin Mills, Portage county.		Dip.
--	Best buck under 2 years	88	Moody & Harrington, Richland county.	10	
--	Second do	95	Oren Jefferson, Erie county.	5	

PREMIUMS AWARDED ON CLASS C.—Continued.

58

COM. NO.	NAME OF ARTICLE.	ENTRY NO.	TO WHOM AWARDED.	DOLL'S.	DIP.
26	FOREIGN SHEEP—(middle wooded.)				
--	Buck	110	J. G. Kinnaird, Lexington, Ky.....	5	Dip.
--	Four sheep entered in this class				
27	FOREIGN SHEEP—(merinos.)				
--	Best buck.....	23	D. Kimball, Clarendon, Vt.	10	Dip.
--	Best pen of 5 ewes	13	D. Kimball, Clarendon, Vt.	10	Dip.
--	do 5 ewe lambs	82	William H. Cox, Dutchess county, N. Y.....	5	Dip.
--	SHEEP, OPEN TO ALL.				
28	Best long-wooled buck	91	J. Townshend, Avon, Licking county		Dip.
--	do middle do	111	J. G. Kinnaird, Lexington, Ky.		Dip.
--	do merino do	101	William S. Wright, Granville.....		Dip.
--	do saxon do	86	Eli Keller, Newark.....		Dip.
--	Best pen of 5 merino ewes	57	R. T. Burnham, Woodstock.....		Dip.
--	do 5 saxon ewes	68	A. Miller, Etam.....		Dip.
--	do 5 buck lambs.....	98	Jacob Skoolfire, Hebron		Dip.
--	do 5 ewe lambs.....	39	N. Linton, Clinton county.....		Dip.
--	SHEPHERD'S DOG.				
29	Best shepherd's dog	31	L. G. Collins, Clarksville, Clinton county.....	5	Dip.
--	Second do	50	J. McFadden, Harrison county	3	Dip.

PREMIUMS AWARDED ON CLASS D.

COM. NO.	NAME OF ARTICLE.	ENTRY NO.	TO WHOM AWARDED.	DOLLARS.
30	Best boar over 2 years	39	Geo. Garlinghouse, Delaware county	10
--	Second do	23	Jacob Egbert, Lebanon	5
--	Best boar one year old	34	J. Hadley, Clarksville, Clinton county	10
--	Second do	21	Henry Ridenhour, Franklin county	5
--	Best boar 6 months and under 1 year	23	Jacob Egbert, Lebanon	8
--	Second do	41	Geo. Garlinghouse, Delaware	5
--	Best breeding sow over 2 years,	36	Wm. Hagerman, Warren county	10
--	Second do do	51	Jas. R. Anderson, Ross county	5
--	Best breeding sow one year old,	37	Wm. Hagerman, Warren county	10
--	Second do do	33	J. Hadley, Clarksville, Clinton county	5
--	Best sow 6 months and under 1 year	42	Geo. Garlinghouse, Delaware county	8
--	Second do do	47	John Seaman, Warren county	5
--	Best lot pigs not less than 5 months	23	Jacob Egbert, Lebanon	10
--	Second do do	43	Geo. Garlinghouse, Delaware county	5
31	One Berkshire sow,	50	Wm. H. Cox, Dutchess county, N. Y.	5
	FOREIGN HOGS.			

PREMIUMS AWARDED ON CLASS E.

COM. NO.	NAME OF ARTICLE.	ENTRY NO.	TO WHOM AWARDED.	DOLLARS.
32	Best lot of dorkings	18	J. D. Bourne, Sandusky City	---
--	do Polands	8	Melendy & Jasper, Hamilton county	---
--	Best pair wild turkeys	14	Aaron Benedict, Morrow county	3
--	do	25	M. L. Sullivan, Franklin county	3
--	Best pair Muscovy ducks	1	H. C. Noble, Columbus	3
--	Best lot of any other distinct breed.	35	Jas. Van Dusen, Cincinnati	3
--	Best lot of game-cocks and hens	31	A. W. Brown, Columbus	3
--	Best pair Silician ducks	45	Geo. Smith, Clark county	com.
--	Best lot of poultry	10	Melendy & Jasper, Hamilton county	com.
--	China Geese, }	11	{ A specimen of each found on exhibition by the committee, but not entered on the books, and highly commended.	---
--	Wild Geese, }			
--	PREMIUMS RECOMMENDED BY AWARDING COMMITTEE.			
--	2 pairs Poland ducks	17	Hazen & Fisher, Greene county	PR. REC.
--	16 Shanghaese chickens	16	Hazen & Fisher, Greene county	do
--	11 half-breed wild turkeys	15	Aaron Benedict, Morrow county	do
--	Game chicken	3	J. K. Leader, Groveport, Franklin county	do
--	2d best lot of Dorkings	27	M. L. Sullivan, Columbus	do
--	do Polands	32	Charles Patton, Cincinnati	do

PREMIUMS AWARDED ON CLASS F.

COM. NO.	ARTICLES.	ENTRY. NO.	TO WHOM AWARDED.	DOL. LARS	DIP.
33	Plow for general purposes	71	N. B. Starbuck, Troy, New York	7	Dip.
--	do clay soils	45	Girty & Elliott, Cleveland	7	Dip.
--	do light sandy soils	123	Garrett & Cottman, Cincinnati	7	Dip.
--	do black mud.	105	M. Bright, Circleville	7	Dip.
--	do sward	74	N. B. Starbuck, Troy, New York	7	Dip.
--	do sub-soil	39	William C. Paggett, Xenia	7	Dip.
--	do side-hill	49	Girty & Elliott, Cleveland	7	Dip.
--	do one-horse	82	T. Wilmington, Troy	3	Dip.
34	Farm Wagon	1	S. Brush		Cup.
--	do	136	Thomas S. Seeley, Medina county	10	Dip.
--	Carriage, (two horse)	147	J. A. Shannon, Columbus	10	Dip.
--	Market wagon	148	J. T. Cherry, Zanesville	10	Dip.
--	Buggy wagon	184	E. Sinands, Pen Yan, New York	Dia.	Dip.
--	Mowing machine	115	Minturn, Allen & Co., Urbana	10	Dip.
--	Horse power, (general purposes)	253	E. Thresher & Co., Dayton	10	Dip.
--	Threshing machine	185	C. M. Russell, Maesillon	10	Dip.
--	Portable saw mill	241	Girty & Elliott, Cleveland	10	Dip.

The committee were divided in opinion in reference to the reaping machines entered as 38, McCormick's, and No. 114, Hussey's; therefore, no premium was awarded.

PREMIUMS AWARDED ON CLASS F. — Continued.

COM. NO.	ARTICLES.	ENTRY NO.	TO WHOM AWARDED.	DOL- LARS	DIP.
35	Harrow	52	Girty & Elliott, Cleveland	5	Dip.
-	do	171	Pinney, Lamson & Co., Columbus	-	Dip.
-	Field Roller	12	Hiram Harris, Franklin county	-	Dip.
-	do	257	A. J. Thomas, Warren county	5	Dip.
-	Wheat Drill	117	L. E. Adams, Knox county	5	Dip.
-	do	20	Bidler & Beary, Lancaster	-	Dip.
-	Wheat Drill	244	Reuben D. Turner, Fort Wayne, Indiana	Dis.	Dip.
-	Horse Rake	161	Joseph Curtis, Lake county	5	Dip.
-	Corn Planter	96	C. S. Chisom, Dayton	-	Dip.
-	do	107	Jacob Barnhill, Circleville	5	Dip.
-	Cultivator	103	Wardner & Brokaw, Clark county	-	Dip.
-	do	113	Enoch Sweat, Brockport, New York	5	Dip.
-	Corn Cultivator	54	Girty & Elliott, Cleveland	-	Dip.
-	do	214	J. L. Ward, Portsmouth	-	Dip.
-	Fanning Mill	90	E. Bliss, Mason county, Kentucky	-	Dip.
-	do	97	John Bean, Richland county	5	Dip.
-	Clover seed Machine	97	M. H. Mansfield, Ashland	5	Dip.
-	Corn Coverer	215	J. L. Ward, Portsmouth	-	Dip.
-	Corn Sheller, horse power,	159	E. S. Miller, Troy, Ashland county	5	Dip.
-	do highly commended	56	Girty & Elliott, Cleveland	3	Dip.
-	Straw and Hay Outter	57	Girty & Elliott, Cleveland	5	Dip.
-	Corn stalk cutter	220	B. Dinmore, Brockport, New York	3	Dip.
-	Vegetable root cutter	59	Girty & Elliott, Cleveland	3	Dip.
-	Churn	135	Wheat, Jones & Co., Lorain county	3	Dip.
-	Cheese press	195	A. N. Severance, Ashtabula county	3	Dip.
-	Bee palace	160	E. W. Phelps, Newark	3	Dip.

35	Washing machine	65	S. Wilson, Willoughby	3	Dip.
	Articles of which but one sample, was presented, and not possessing any particular claim to premiums, but commended by the committee.				
36	Straw Forks	176	Pinney, Lamson & Co., Columbus		
	Potato Diggers	226	E. W. Crittenden, Cuyahoga Falls		
	Grapevine cultivators	227	do do do		
	Dirt Pick	236	do do do		
	Corn cradles for broad-cast corn and lodged grain	233	Samuel Wilson, Lake county		
	Canal Wheel-barrow	211	Waggie & Co., Portsmouth		
	Fruit Ladder	205	Emery & Co., Albany, New York		
	Common corn hoes	222	E. W. Crittenden, Cuyahoga Falls		
	do do	179	Pinney, Lamson & Co., Columbus		
	Glass Hydraulic Ram	201	Emery & Co., Albany, New York		
37	Grain cradles	174	Pinney, Lamson & Co., Columbus	5	Dip.
	Hay forks	177	do do do	2	Dip.
	Grass scythes	7	North Wayne Scythe Co., Maine	2	Dip.
	Cradle scythes	7	North Wayne Scythe Co., Maine	2	Dip.
	Manure forks	206	Emery & Co., Albany, New York	2	Dip.
	Axes	255	J. G. & M. Krumm, Columbus	3	Dip.
	Best and most numerous assortment of agricultural implements	64	Girty & Elliott, Cleveland	20	Dip.
	Best assortment of implements made in Ohio	246	E. Thresher & Co., Dayton	20	Dip.
	Church bells	11	George L. Hanks, Cincinnati	10	Dip.
	Churn	17	F. G. Simpson, Newark, New Jersey	1	Dip.
	Axe-helves	19	John Newkirk, Columbus	1	Dip.
	Apple pearer	108	Jacob Barnhill, Circleville	1	Dip.
	Ox yoke	172	Pinney, Lamson & Co., Columbus	2	Dip.
	Scythe snaths	173	do do do	2	Dip.
	Shovels and spades	231	E. W. Crittenden, Cuyahoga Falls	2	Dip.
	Rockaway carriage	252	A. W. Hurlburt, Cleveland		Dip.

PREMIUMS AWARDED ON CLASS F. — Continued.

COM. NO.	NAME OF ARTICLE.	ENTRY NO.	TO WHOM AWARDED.	DOL- LARS	DIP.
37	Top buggy	145	J. A. Shannon, Columbus	---	Dip.
--	Trotting buggy	101	F. Crowley, Cleveland	---	Dip.
--	Steamboat bell	11	George L. Hanks, Cincinnati	5	Dip.
38	Plowing match, 1st premium	---	N. French, Detroit	10	---
--	do do 2d premium	---	N. B. Starbuck, Troy, New York	5	---

PREMIUMS AWARDED ON CLASS G.

COM. NO.	NAME OF ARTICLE.	ENTRY NO.	TO WHOM AWARDED.	DOLLS.	DIPLOMA.
40	Best barrel coarse salt,	23	J. & J. Ballard, Athens county	5	Diploma.
--	Do fine salt,	23	J. & J. Ballard, Athens county	3	do
--	Superior article coarse salt	33	Wm. Sherwood, McConnellsville		do
--	Best barrel of flour,	5	Watson & Co., Columbus	5	do
--	2d do	27	Hildreth & Lamb, Newark	3	do
--	Superfine flour,	50	H. & D. Smith, Newark		do
--	Do	67	Lewis Strong, Knox county		do
41	Best ten lbs. Ohio butter in rolls,	68	Samuel Creswell, Greene county	10	
--	2d do	6	Hugh Grant, Franklin county	5	
--	Best firkin Ohio butter not less than 50 pounds,	90	J. Havens, Delaware county	10	
--	2d do	54	Edward Matcham, Lorain county	5	
--	Best 10 loaves Ohio bread,	7	J. Harvey, Mansfield	5	
--	2d do	78	Mark Leadly, Columbus	3	
--	Best 6 hams, Ohio,	79	N. W. Thatcher, Chillicothe	5	
42	Best cheese over 1 year old,	53	E. Matcham, Lorain county	10	
--	2d do	21	George Garlinghouse, Delaware county	5	
--	Best cheese under 1 year old,	38	A. Fenner, Miami county	10	
--	2d do		L. Laphane, Lake county	5	
--	Best cream cheese,	87	Mrs. Mary Farrar, Madison county	5	

The committee also especially commend cheese presented by R. E. Beman, of Trumbull Co., and by Mr. Hale, of Cuyahoga Co.

PREMIUMS AWARDED ON CLASS G — Continued.

COM. NO.	NAME OF ARTICLE.	ENTRY NO.	TO WHOM AWARDED.	DOLLS.	DIPLOMA.
43	Best 10 lbs. honey,	1	Henry Innis, Franklin county	5	
--	2d do	31	G. Demorest, Franklin county	3	
--	Best 10 lbs maple sugar,	47	Rufus Benan, Trumbull county	5	Diploma.
--	11 boxes honey,	24	Edwards & Platt, Brooklyn, L. I.		do
--	2 jars preserved peaches,	89	J. Farrar, Madison county		
44	Best sample Ohio wheat, 1 bbl.,	77	Thomas Herd, Rockport	5	
The committee also commend wheat presented by W. Bonar, of Mt. Vernon, and wheat presented by Blydenburgh & Co., New York.					
--	Best sample Ohio oats, 1 bbl.	41	B. B. Jackson, Huron county	5	
--			Oats presented by D. Hunt, Delaware county, are commended.		
--	Best sample of barley, 1 bbl.	45	J. W. Seamen, Warren county	5	
--	Do Oage orange seed,	97	James Sumpter, Union county, Ia	pr.rec.	
--	Do Indian corn,	8	G. S. Innis, Franklin county	5	
--	1 bundle oats and straw,	30	Berger & Risel, Franklin county	1	
--	1 sample corn for bottom land,	75	R. Leach, Madison county	1	
--	Best sample flax seed,	44	J. W. Seamen, Warren county	3	
--	Best sample hops, (from A. J.)	180	John Conoway, Ripley county, Ia	5	
--	Best sample timothy seed,	43	J. W. Seamen, Warren county	3	
--	Superior do	28	D. Hunt, Delaware county	recom.	
--	Best variety seed corn for bottom land.	48	Jacob Slyh, Franklin county	3	
--	Specimens tobacco,	2	J. M. Wilson, Franklin county		Diploma.
--	20 varieties English grain and seeds		The committee commend specimens English grain, presented by M. B. Bateham, Columbus.		
39	Best fleece of fine wool,	86	J. M. Wood, Morrow county	5	

PREMIUMS AWARDED ON CLASS H.

67

COM. NO.	NAME OF ARTICLES.	ENTRY NO.	TO WHOM AWARDED.	DOL'S.	DIPLOMA.
53	Sparkling Catawba, vintage 1849	538	Nicholas Longworth, Cincinnati	Com.	---
---	Sparkling Isabella, vintage 1850	538	Nicholas Longworth, Cincinnati	to Ex.	---
---	La'ies wine,	538	Nicholas Longworth, Cincinnati	Com.	---
---	Still. Catawba, vintage-1850,	unk'n.	N. W. Thatcher	do	---
---	Current wine,	do	Charles Carpenter, Kelly's Island	do	---
45	Silk vestings, cravats and handkerchiefs	96-7-8	Isaac E. Jones, Cincinnati	3	Diploma
---	General variety of silks	428	J. W. Gill, Wheeling, Virginia	5	Diploma
46	10 yards woollen cloth, made in Ohio	212	Charles & G. Merritt, Alpha	10	---
---	do do 2d	401	George Barrett	5	---
---	do do domestic	337	Mrs. E. Matcham, Pittsfield	p. rec.	---
---	10 yards satinnet,	342	Perkins Company, Akron	8	---
---	do do 2d	211	C. & G. Merritt, Alpha	5	---
---	10 yards jeans,	507	C. C Wolcott, Steubenville	5	---
---	do do 2d	519	John Mesmore, Fayette county	3	---
---	Pair woollen blankets,	209	Charles & G. Merritt, Alpha	5	---
---	do do 2d	135	Thomas S. Bennett, Chillicothe	3	---
---	10 yards flannel,	210	Charles & G. Merritt, Alpha	5	---
---	do do 2d	298	Rufus Beeman, Trumbull county	3	---
---	do do domestic,	299	Rufus Beeman, Trumbull county	p. rec.	---
---	do do do	338	Mrs. E. Matcham, Pittsfield	do	---
---	15 yards woollen carpet,	293	R. E. Beeman, Trumbull county	5	---
---	do do 2d	550	J. D. Osborn, Columbus	3	---
---	10 yards kersey,	401	George Barrett	5	---
---	do do 2d	213	Charles & G. Merritt, Alpha	3	---
---	Hearth-rug,	389	J. M. Tilden, Portage	5	---

PREMIUMS AWARDED ON CLASS H — Continued.

COM. NO.	NAME OF ARTICLES.	ENTRY- NO.	TO WHOM AWARDED.	DOL'S.	DIPLOMA.
46	Hearth-rug	36	Mrs. Mary J. Harrison, Columbus	3	---
--	15 yards rag-carpet,	339	Mrs. E. Matcham, Pittsfield	5	---
--	do do	179	Samuel Brelsford, Columbus	3	---
--	Double carpet coverlet,	136	W. L. Heiser, Chillicothe	5	---
--	do do	391	D. Cosley, Xenia	3	---
--	Pair woollen knit stockings,	395	Mrs. A. Fuller, Meigs county	2	---
--	do do	371	D. B. Kinney, Lorain county	1	---
--	do do	366	Mrs. M. C. Shelby, Lexington, Kentucky	p. rec.	---
--	Pair linen knit stockings,	361	S. W. Lincoln, Lorain county	2	---
--	Pair cotton knit stockings,	562	Anna Horn, Ross county	1	---
--	1 pound linen sewing thread,	361	S. W. Lincoln, Lorain county	1	---
--	Discretionary premiums recommended.				
--	Fancy hats	121	C. B. Caup, Cincinnati	---	Diploma
--	Woollen yarn,	214	C. and G. Merritt, Xenia	p. rec.	---
--	do	325	Foster & Kramer, Chillicothe	do	---
48	Ornamental needle-work,	384	Mrs. J. N. Burr, Columbus	3	Diploma
--	Fancy chair-work with needle,	370	W. Coleman, Cincinnati	3	Diploma
--	Worked quilt,	167	Caroline Mathews, Painesville	3	Diploma
--	do	351	Miss Catharine Ball, Morrow county	3	Diploma
--	White quilt,	327	R. Menager, Mason county, Va.	3	Diploma
--	Silk patch-work quilt,	411	Mrs. C. F. Solis, Columbus	3	Diploma
--	do do	365	Miss N. C. Shelby, Lexington, Kentucky	3	Diploma
--	Straw bonnets,	251	William Wadsworth, Portage county	3	Diploma
--	Ornamental shell-work,	67	Mrs. Lockett, Chillicothe	3	Diploma

48	Wax Flower,	-----	242	J. H. Edinger, Newark	-----	3	Diploma
--	Ornamental false hair, Com. recommended	-----	279	Thomas Hart, Cincinnati	-----	3	Diploma
--	Emb. centre for sofa back, do	-----	112	Miss D. E. Kellen, Canton	-----	3	Diploma
--	Veil, do	-----	234	Mrs. O. Allen, Columbus	-----	3	Diploma
--	Emb. dogs and landscape, do	-----	544	Miss Dennison, Dayton	-----	3	Diploma
--	Embroidered Greek Exiles, do	-----	317	Miss L. Woodbridge, Chillicothe	-----	3	Diploma
--	Embroidered Cat, do	-----	318	Mrs. Hosea Williams, Delaware county	-----	3	Diploma
--	Embroidery, do	-----	357	Mrs. William King, Lithopolis	-----	3	Diploma
1	Embroidered shoes, do	-----	358	Mrs. William King, Lithopolis	-----	3	Diploma
--	Embroidered blankets, do	-----	375	Mrs. E. S. Miner, Newark	-----	3	Diploma
--	Table spread, do	-----	403	Miss Huston, Worthington	-----	3	Diploma
--	Worked cape, do	-----	373	Miss Cox, Zanesville	-----	3	Diploma
--	Embroidery, do	-----	528	Julia A. Waggoner, Seneca county	-----	3	Diploma
--	Landscape, do	-----	529	Mary J. Waggoner, Seneca county	-----	3	Diploma
--	Landscape, do	-----	542	Madame De Fleur, Columbus	-----	3	Diploma
--	Ottoman covers, do	-----	260	Mrs. W. J. Fell, Columbus	-----	3	Diploma
--	Worked quilts, do	-----	397	Josiah Bailey, Lieking county	-----	3	Diploma
--	Shell pyramid, En. No n't f'd do	-----	376	Miss Gregory, Columbus	-----	3	Diploma
--	Case of millinery, do	-----	276	Mrs. Hudson, Cincinnati	-----	3	Diploma
--	do do	-----		Miss H. A. Miller and sisters, Kirkersville	-----	3	Diploma
49	Consolidated with 48.						
50	Painting in water-colors, animal	-----	246	Miss Lucy Sullivan, Columbus	-----	--	Diploma
--	Drawing in water colors, animal	-----	248	Miss Lucy Sullivan, Columbus	-----	--	Diploma
--	Drawing, mechanical	-----	388	J. H. & E. H. Knight, Cincinnati	-----	--	Diploma
--	Drawings and designs, monumental	-----	168	J. G. Batterson, Hartford, Conn.	-----	--	Diploma
--	Monochromatic Painting	-----	178	Wm. Searle, Cincinnati	-----	--	Diploma
--	Daguerreotypes	-----	259	W. C. North, Cleveland	-----	--	Diploma
--	Plasterparis statuary	-----	133	Jas. Fazzi, Cincinnati	p. rec.	--	S. medal
--	Sculpture	-----	131	W. C. Bullitt, Cincinnati	do	--	do
--	Cameo monument and statuette	-----	168	J. G. Batterson, Hartford, Connecticut	do	--	Diploma
--	Painting in imitation of wood	-----	18	Jacob Deal, Columbus	do	--	Diploma
--	Painting in oil, fruit	-----	412	Wm. Bamborough, Columbus	do	--	Diploma

PREMIUMS AWARDED TO CLASS H — *Continued.*

COM. NO.	NAME OF ARTICLES.	ENTRY NO.	TO WHOM AWARDED.	DOL'S.	DIPLOMA.
51	No premium awarded, as none of the articles exhibited come under the rules of awardment.				
52	Buckeye Slate cooking stove.....	564	W. C. Davis & Co., Cincinnati.....	--	Diploma
--	Hot blast do do for coal.....	535	J. L. Gill, Columbus.....	--	Diploma
--	Parlor stove.....	379	Woolson & Hitchcock, Cleveland.....	--	Diploma
--	Fire fronts and grates.....	535	J. L. Gill, Columbus.....	--	Diploma
--	Superior workmanship on fire fronts and grates.....	564	W. C. Davis & Co., Cincinnati.....	--	Diploma
--	Do do do.....	379	Woolson & Hitchcock, Cleveland.....	--	Diploma
--	Aparatus for warming dwellings.....	201	Adolphus Lotze, Cincinnati.....	--	Diploma
53	Knife scourer.....	433	Christopher Aumock, Columbus.....	--	Diploma
--	Lime kiln.....	436	Joseph Frost, Rochester, New York.....	--	Diploma
--	Screw for raising buildings.....	400	Elijah Durfee, Licking county.....	--	Diploma
--	Wheat burrs.....	45	J. S. Sterling & Co., Buffalo, New York.....	cup 10	Diploma
--	Corn crusher, [from class F.].....	154	Isaac Straub, Cincinnati.....	5	Diploma
--	Stone pump for well or cistern.....	34	C. Reed, Newton Falls.....	--	Diploma
--	Cattle scale.....	39	I. N. Brooks, St. Johnsbury, Vermont.....	--	Diploma
--	Sewing machine.....	56	John Winfield, Canfield.....	--	Diploma
--	Self-weighting machine.....	71	Biddle & Reed, Lafayette, Indiana.....	--	Diploma
--	Power looms.....	74	A. McMillen & Son, Dayton.....	--	Diploma
--	Stone pump.....	146	E. H. & C. J. Merrill, Middleburg.....	--	Diploma
--	Iron safe.....	187	Lippencott & Barr, Pittsburgh, Pennsylvania.....	5	Diploma
--	Self coupling and truck guide.....	205	E. J. Durant, Lebanon, New Hampshire.....	--	Diploma
--	Machine for morticing blind stiles.....	206	E. J. Durant, Lebanon, New Hampshire.....	5	Diploma
--	Tool morticing machine.....	207	E. J. Durant, Lebanon, New Hampshire.....	--	Diploma
--	Match splitting machine.....	215	L. L. Gilliland, Dayton.....	--	Diploma

53	Bran duster and atmospheric bolt.....	219	Carr & Hughes, Cincinnati.....	---	Diploma
--	Bedstead fastener.....	221	J. H. Stottlemeyer, Cambridge	--	Diploma
--	Bolt, screw-cutter and drilling machine.....	252	Van Brocklen & McLean, Royalton, New York	5	Diploma
--	Machine for rubbing and polishing marble.....	271	W. A. Peasley, Shelbyville, Indiana	5	Diploma
--	Parallel vice.....	291	S. J. Houch, Springfield.....	--	Diploma
--	Square thread bench screw.....	301	S. E. Cary, Fincastle.....	--	Diploma
--	Bran separator.....	352	David Reynolds, Zanesville.....	--	Diploma
--	Carpenter's reverting flues.....	417	T. B. Wing, Cincinnati.....	--	Diploma
--	Sawed lumber.....	523	W. F. Bruck, Franklin.....	--	Diploma
--	Water ram.....	549	M. B. Batcham, Columbus.....	--	Diploma
--	Smut machine.....	553	H. D. Reynolds, Bellefontaine	--	Diploma
--	Patent dies for cutting screws.....	547	P. W. Gales, Chicago, Illinois	--	Diploma
--	Smut and scouring machine.....	553	Leonard Smith, Troy, New York	--	Diploma
--	Metalic burial case.....	564	W. C. Davis & Co., Cincinnati	--	Diploma
--	Smut machine.....	568	I. Hollingsworth, Zanesville.....	5	Diploma
--	Double action pump.....	408	N. Newman, Cincinnati	5	Diploma
--	Pump for well or cistern.....	12	D. R. & M. S. Rockety, Lithopolis	--	Diploma
--	Steam engine.....	22	J. Ridgway, Columbus.....	--	Diploma
--	Upright do.....	80	Ambos & Lennox, Columbus	20	Diploma
--	Steam boiler.....	81	Ambos & Lennox, Columbus	--	Diploma
--	Switch frog, and switch stand.....	85	Ambos & Lennox, Columbus	--	Diploma
--	Grist mill.....	90	J. H. Burrows & Co., Cincinnati	--	Diploma
--	Beltng.....	92	J. Seymour, Cincinnati.....	--	Diploma
--	Corn crusher.....	93	W. Stewart, Cincinnati.....	--	Diploma
--	Head blocks for saw mill.....	110	J. S. Snyder, Lancaster	10	Diploma
--	India Rubber pump.....	134	A. G. Babcock, Cleveland	--	Diploma
--	Bottled cider.....	329	J. W. Fowler, Milan	--	Diploma
--	Bran duster.....	166	E. B. Benton, Cleveland	--	Diploma
--	Do do.....	219	Carr & Hughes, Cincinnati	5	Diploma
--	Iron safe.....	225	Hall & Dodd, Cincinnati.....	--	Diploma
--	Mercurial Indicator.....	466	A. Salter, Cincinnati.....	--	Diploma
			The committee commend a tyre-bending, drilling, and boring machine, presented by Messrs. Way, of Greene county.		

PREMIUMS AWARDED ON CLASS H — Continued.

COM. NO.	NAME OF ARTICLES.	ENTRY NO.	TO WHOM AWARDED.	DOL'S.	DIPLOMA.
54	Dressing bureau	241	Jas. Huey, Zanesville		Diploma
--	Sofa	149	I. G. Dryer & Co., Columbus		Diploma
--	Lounge	46	M. Halm, Columbus		Diploma
--	Centre table	152	I. G. Dryer & Co., Columbus		Diploma
--	Rocking chair	153	I. G. Dryer & Co., Columbus		Diploma
--	Pancy chair	154	I. G. Dryer & Co., Columbus		Diploma
--	Canopy bedstead	47	Michael Halm, Columbus		Diploma
--	Sofa bedstead	88	A. G. Warren, Norwich, Connecticut		Diploma
--	Billiard table	64	D. J. Smith, Cincinnati		Diploma
--	Book case	263	William Dealtry, Piqua		Diploma
--	Melodeons	272-3	Murch and White, Cincinnati	Medal	Diploma
--	Piano	343	J. Snyder, Cleveland	Medal	Diploma
--	Pianos, [Chickering's,]	540	R. Reed, Columbus	Cup	
--	Do [Gilbert's,]	540	R. Reed, Columbus	Medal	Diploma
55	Stone ware	347	Simms & Rodman, Mt. Sterling	3	Diploma
--	Stained and painted window glass	114	Spears & Wright, Cincinnati		Diploma
56	Barrels	381	R. S. Brelsford, Ross county	3	
--	Tubs	344	J. Hill, Franklin county	3	
58	Compound square	83	Henry Tongue, Columbus		Diploma
--	Self-adjusting carriage brake	89	H. Greer, Worthington		Diploma
--	Coupling for fire engine hose	103	J. W. Osgood, Columbus	3	
--	Paper counting machine	104	J. W. Osgood, Columbus		Diploma
--	Hand machine for spinning wool	115	Margaret Halings, Randolph county		Diploma
--	Card setting machine	118	J. M. Hale, Akron	5	

58	Cards, [manufactured,]	119	J. M. Hale, Akron	5	Diploma
--	Bed screw cutting machine	123	B. A. & H. O. Sheldley, Seneca county		Diploma
--	Glue and nurse kettles	126-7	R. F. Beebe, New York City		Diploma
--	Stone water pipe	203	E. H. & C. J. Merrill, Summit county		
--	Bedstead fastener	281	Samuel Bell, West Middleburg		Diploma
--	Double-barrelled shot gun	302	M. Schneider, Columbus		Diploma
--	Target and hunting rifle	303	M. Schneider, Columbus		1st Dip.
--	Lard oil	305	Burkhardt & Co., Cincinnati		2d Dip.
--	Lard oil	319	H. Smith, Cincinnati		Diploma
--	Metalic fire and water-proof paint	328	W. Wilson & Co., Brooklyn, Ohio		Diploma
--	Rifle gun	348	R. Yarley, Lake county		Diploma
--	Bottled cider	329	F. W. Fowler, Milan		Diploma
--	Jar cucumber pickles	424	A. Frankenberg, Columbus		Diploma
--	Piano	343	J. Snyder, Cleveland	10	
--	White lead, in oil and dry	216	S. Hazlett, & Son, Zanesville		1st Dip.
--	Do do	182	B. A. Fahnestock & Co., Pittsburg, Pennsylvania		2d Dip.
--	Paints	180	Conklin, Wood & Co., Cincinnati		Diploma
--	Castor oil	181	Conklin, Wood & Co., Cincinnati		Diploma
--	Philosophical instruments and school apparatus	531	D. Holbrook, Cuyahoga county		Diploma
--	Native willow hamper basket	183	William Burnet, Cincinnati		Diploma
--	Wool wheel	57	A. Mathews, Perry tp., Franklin county	3	
--	Target and hunting rifle	87	C. Seibert, Columbus		Diploma
--	Manufactured spices	94	Dixon, Shoemaker & Co., Cincinnati		Diploma
--	Curled palm leaf, cotton and superior spring mattress	101	J. H. Beebe, Columbus		Diploma
--	Patent water cooler	184	Wm. Burnet, Cincinnati		Diploma
--	Purdonian coal vase	185	Wm. Burnet, Cincinnati		
--	Curled hair and mattresses	188-9	Wisdom, Russell, & Co., Cleveland	3	
--	Tracing and impression paper	202	R. F. Beebe, New York City		Diploma
--	Copper ware and iron box fenders	236	Haven, Boyd & Co., Zanesville		Diploma
--	Brick	239	O. Gardner, Worthington		Diploma
--	Case of sugar work	253	P. Ambos & Co., Columbus		Diploma
--	Lot of lap shingles	518	Wm. Vail, Franklin county		Diploma
--	Lightning rod, points and silver plating on do	524-5	C. Hoy & C. C. F. Force, Hamilton county		1st Dip.
--	Do do do	140	C. Williams, Springdale, Hamilton county		2d Dip.

PREMIUMS AWARDED ON CLASS H — Continued.

COM. NO.	NAME OF ARTICLES.	ENTRY NO.	TO WHOM AWARDED.	DOL'S.	DIPLOMA.
58	Ice cream freezer.....	555	G. Coffee, Warren county.....		Diploma
--	Baskets.....	565	S. M. Watson, Blendon.....		Diploma
--	Glass and emery paper and scythe rifles.....	570	Jno. Van Amringe, Cincinnati.....		Diploma
--	Matrasses and matrass machine.....	265-6	Newark Matrass Co., Newark.....		Diploma
--	Spring steel cultivator teeth.....	315	Enoch Sweat, Rochester, New York.....		Diploma
--	Cider mill.....	368	J. M. Gardner, Ohio City.....		Diploma
--	Brooms.....	377	Joseph Clifton, Licking county.....		Diploma
--	Cigars.....	410	Herman Proespik, Columbus.....	3	Diploma
--	Lever jack.....	414	Henry Croft, Springfield.....		Diploma
--	Stave cutting and jointing machine.....	122	Swinnes & Sheffield, Urbana.....		Diploma
--	Hats and caps.....	330	D. Wolford, Portsmouth.....		Diploma
--	Scales from 200 to 2000 lbs.	308-13	Hitchcock & Masters, Rochester, New York.....		Diploma
--	Specimens of iron.....	544	Jas. E. Palmer, Zanesville.....		Diploma
59	Saws.....	106	Turner & Son, Cincinnati.....		Diploma
--	Cutlery.....	159	D. West, New York.....		Diploma
--	Box sheet iron.....	171	Morrill, Jordan & Phillips, Cincinnati.....		Diploma
--	Carpenter's tools.....	172	Ohio Tool Co., Columbus.....		Diploma
--	Cooper's tools, wood.....	173	Ohio Tool Co., Columbus.....	3	Diploma
--	Do do iron.....	174	Ohio Tool Co., Columbus.....		Diploma
--	Plane irons.....	175	Ohio Tool Co., Columbus.....		1st Dip.
--	Axle boxes.....	264	Samuel Williamson, Cincinnati.....		Diploma
--	Boiler iron.....	275	D. Wolf, Cincinnati.....		Diploma
--	Hardware, framing tools.....	288	Kilbourne, Kuhns & Co., Columbus.....		Diploma
--	Stirrup iron.....	306	N. Post, E. Cleveland.....		Diploma
--	Door latch.....	307	N. Post, E. Cleveland.....	1	Diploma
--	Augurs.....	333	Watrous & Co., Ravenna.....		Diploma

Stencil plates.....	350	P. W. Hosking, Columbus.....	Diploma
Bench planes.....	362	Daniel Lewis, Knox county.....	2d Dip.
Sash balance.....	392	H. C. Brown, Xenia.....	Diploma
Tools, portable forge, and saw gumming machine.....	393	Gere, Abbott & Co., Columbus.....	Diploma
Lard lamp.....	360	Richardson & Brothers, Pickaway county.....	Diploma
Blacksmith hammers.....	579	L. B. McComas, Waynesville.....	Diploma
Railroad chairs.....	560	Jas. B. Harris, Cincinnati.....	Diploma
Tress hoops.....	237	David Spade, Columbus.....	Diploma
Patent sash locks.....	170	I. B. Rose, Hancock, Delaware county, New York.....	Diploma
Excelsior blind hinge and door lock.....	231	Edwards, Morris & Co., Pittsburgh, Pennsylvania.....	Diploma
Jail locks.....	561	A. Sites, Columbus.....	Diploma
Horse shoes.....	500	G. Shreyer, Columbus.....	Diploma
Horse shoe nails.....	500	G. Shreyer, Columbus.....	Diploma
Cut nails and spikes.....	346	Norton, Bailey & Co., Wheeling, Virginia.....	Diploma
Shutter fastener.....	437	N. W. Spears, Cincinnati.....	2d prem.
Saddler's hardware, buckles.....	508	H. Todd, Columbus.....	Diploma
Pocket case of surgical instruments.....	100	Joseph Fenton, Columbus.....	Diploma
Surgical instruments.....	169	D. Weiler, Columbus.....	Diploma
Dental specimens.....	24	Dr. Ide, Columbus.....	Diploma
Dental instruments.....	66	Wolff & Klott, Columbus.....	Diploma
Dental instruments and artificial teeth.....	383	W. W. Riley, Columbus.....	Diploma
Artificial teeth.....	429	Dr. Jas. Alcock, New York.....	Diploma
Knives and steels.....	102	John Mordock, Rossville, Butler county.....	Diploma
Pocket cutlery.....	159	D. West, New York.....	Diploma
Grindstone, frame and mounting.....	532	Whiney & Baker, Cuyahoga county.....	Diploma
Traveling trunk.....	256	Cushman & Howell, Columbus.....	Diploma
Hand trunk.....	353	J. C. Shackelford & Co., Cincinnati.....	Diploma
Carpet bag.....	354	J. C. Shackelford & Co., Cincinnati.....	Diploma
Satchel.....	355	J. C. Shackelford & Co., Cincinnati.....	Diploma
Opera boot.....	223	Grawford & Ortman, Columbus.....	Diploma
Fine boots.....	240	Chas. Languth, Columbus.....	Diploma
Dress gaiters.....	161	Samuel Burdett, Lebanon.....	Diploma

PREMIUMS AWARDED ON CLASS H — *Continued.*

COM. NO.	NAME OF ARTICLES.	ENTRY NO.	TO WHOM AWARDED.	DOL'S.	DIPLOMA.
61	Walking shoes.	162	Samuel Burdett, Lebanon	1	Diploma
--	Toilet or walking slippers	163	Samuel Burdett, Lebanon	1	Diploma
--	Draft collar	199	Edward Rosman, Franklin	1	Diploma
--	Carriage harness, [class F.]	129	E. N. Slocum, Cincinnati	10	Diploma
--	Single do	563	E. N. Slocum, Cincinnati		Diploma
--	Break do	165	J. C. Shackelford, Cincinnati		Diploma
--	Saddletrees	280	J. Trotman, Cincinnati		Diploma
--	Side saddle	355	J. C. Shackelford, Cincinnati		Diploma
--	Man's saddle	356	J. C. Shackelford, Cincinnati		Diploma
--	Top leather, [patent process,]	224	M. P. Howlett, Columbus		Diploma
--	Calf-skins, [Leader & Hall's process,]	269	Hall & Leader, Kirkersville		Diploma
--	Patent and enamelled leather	224	M. P. Howlett, Columbus		Diploma
--	Lot hardware	402	P. Hayden, Columbus	3	Diploma

PREMIUMS AWARDED ON CLASS I.

77

COM. NO.	NAME OF ARTICLES.	ENTRY NO.	TO WHOM AWARDED.	DOLLS.	DIPLOMA.
	PROFESSIONAL LIST.				
62	1 cut flowers, greatest variety and quantity -----	207	McIntosh & Co., Cleveland-----	5	
--	Dahlias, greatest variety-----	--	McIntosh & Co., Cleveland-----	5	
--	Dahlias, best 24 dissimilar blooms -----	--	McIntosh & Co., Cleveland-----	3	
--	Roses, greatest variety -----	--	McIntosh & Co., Cleveland-----	5	
--	Roses, best 24 dissimilar blossoms -----	--	McIntosh & Co., Cleveland-----	3	
--	Phloxes, best 10 varieties -----	--	McIntosh & Co., Cleveland-----	3	
--	Phloxes, best seedling-----	--	McIntosh & Co., Cleveland-----	2	
--	Verbenas, greatest variety and number -----	--	McIntosh & Co., Cleveland-----	3	
--	Verbenas, 12 varieties-----	151	W. Heaver, Cincinnati-----	2	
--	Verbenas, best seedling-----	207	McIntosh & Co., Cleveland-----	2	
--	Bouquets, flat and round lot-----	165-6	W. Heaver, Cincinnati-----	3	recom'd.
--	Greenhouse plants, 85 specimens -----	166	W. Heaver, Cincinnati-----	10	do
--	Dahlias, seedlings -----	207	McIntosh & Co., Cleveland-----	p r rec.	
	AMATEUR LIST.				
63	Greatest variety and quantity of cut flowers -----	212	Mrs. Parsons, Columbus-----		sil. medal
--	Greatest variety of roses -----	213	Mrs. Butties, do -----		do
--	Roses, best 12 dissimilar blooms -----	--	Mrs. Butties, do -----	3	
--	Verbenas, greatest variety -----	211	Dr. Francis Carter, do -----	3	
--	Verbenas, best 12 varieties-----	--	Dr. Francis Carter, do -----	3	
--	Verbenas, best seedling-----	--	Dr. Francis Carter, do -----	3	
--	German Asters, best collection-----	214	Mrs. Gilbert, do -----	2	
	GENERAL LIST.				
64	Green and hot-house plants, best collection owned by one person-----	204	Mrs. Joel Butties, do -----	10 or	sil. medal
--	Best display of plants in bloom owned by one person -----	157	W. Heaver, Cincinnati-----	10	
--	Best floral ornament -----	334	Mrs. G. G. Comstock, Columbus-----	10 or	do

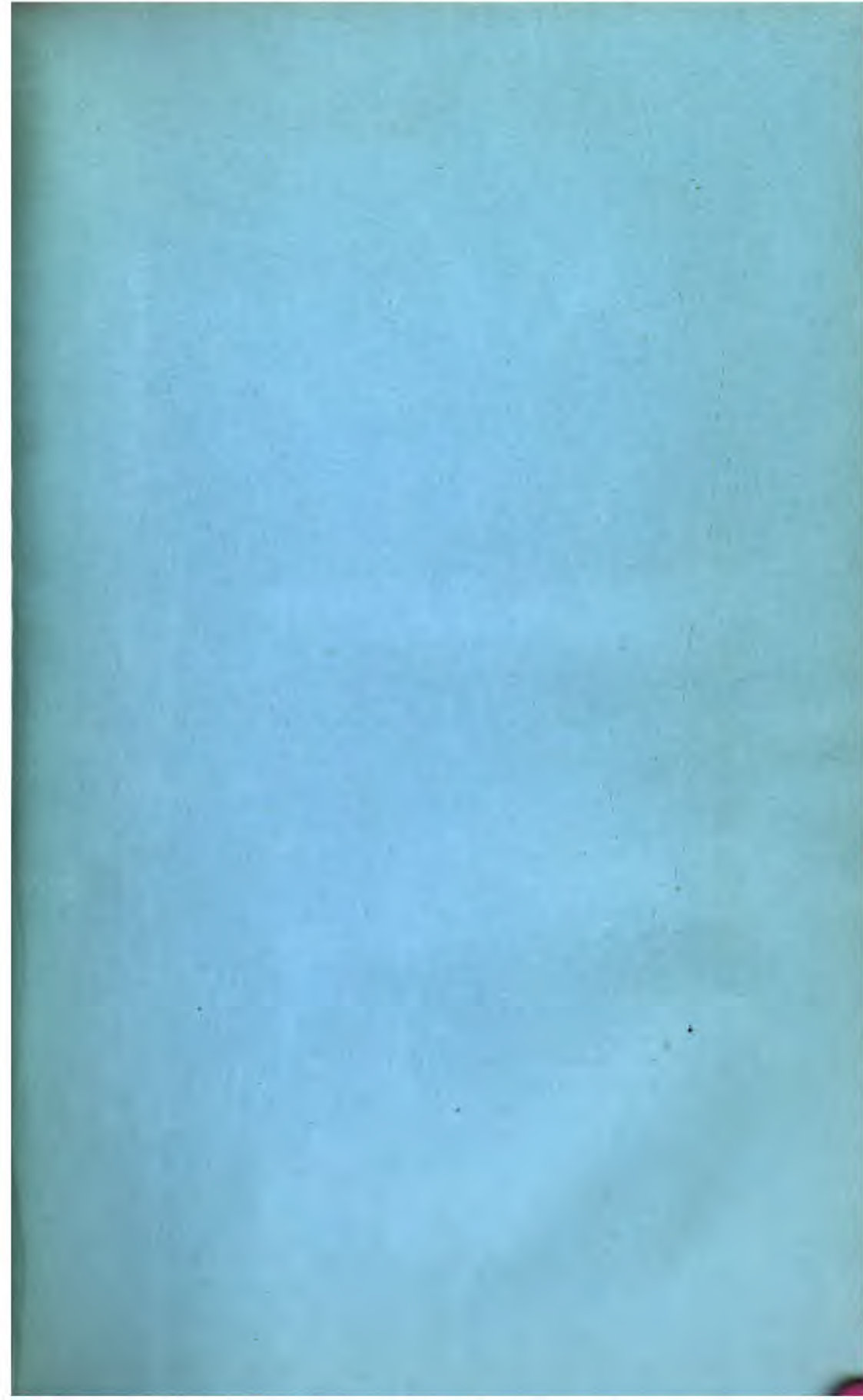
PREMIUMS AWARDED ON CLASS I—Continued.

COM. NO.	NAME OF ARTICLE.	ENTRY NO.	TO WHOM AWARDED.	DOLLS.	DIPLOMA.
64	Best pair hand bouquets, flat	143	Girty & Elliot, Cleveland	5	
--	2d best do	165	Mrs. G. M. Parsons, Columbus	3	
--	Best pair hand bouquets, round	204	Mrs. J. Buttles, do	3	
--	2d best do	179	Mrs. G. M. Parsons, Columbus	2	
--	Best and largest basket bouquet	204	Mrs. Buttles, Columbus	5	
--	Most beautifully arranged basket of flowers	186	Mrs. Henry Noble, Columbus	3 or	Diploma
65	Apples, greatest and best variety of good table	47	Charles Pease, Cleveland	15	& Down-
--	2d best and greatest variety	139	Wm. Andrews, Lorain county	10	ing's col.
--	Apples, best 12 varieties of table	174	Girtv & Elliot, Cleveland	5	fruits or
--	2d do	93	Addison Kelly, Cleveland	3	Diploma
--	Best 6 winter varieties	96-7-8	C. H. Penfield, Lorain county	3	
--	2d do	55-6	B. B. Jackson, Huron county	2	
66	Greatest number of good varieties grown in the west, 85 varieties	49	Charles Pease, Cleveland	20	
--	2d do	176	Girty & Elliot, Cleveland	5 &	Hovey's.
--	Discretionary				
--	Collection of first late autumn and winter pears		Ellivanger & Barry, Rochester, N. Y.		Diploma
--	2d b. collection autumn and winter pears		J. Morse, Cayuga Bridge, N. Y.		Diploma
67	Peaches, best 12 varieties	175	Girty & Elliot, Cleveland	10	
--	Peaches, 2d best 12 varieties	175	Girty & Elliot, Cleveland	5	
--	Peaches, best six varieties	175	Girty & Elliot, Cleveland	5	
--	Peaches, best plate Ward's late free stone	175	Girty & Elliot, Cleveland	5	
--	Peaches, 2d best plate, Crawford's late		Carpenter, Kelly's Island	3	

68	Quinces, best 12.....	207	McIntosh & Co., Cleveland.....	3	Diploma
--	Quinces, 2d best 12.....	149	Gov. Wood, Cleveland.....	2	
69	Grapes, best and most extensive collection good native, grown in open air.....	208	H. H. Coit, Cleveland.....	10	Diploma
--	Grapes, best 3 varieties, native or foreign, grown under glass.....	163	W. Heaver, Cincinnati.....	6	
--	Grapes, 2d best 3 varieties as above.....	164	W. Heaver, do.....	3	
--	Grapes, best dish native.....	183	N. W. Thatcher, Chillicothe.....	5	
--	Grapes, best new seedling.....	189	R. P. Fulkerson, Ashland.....	5	Diploma
70	Watermelons, best 6 specimens.....	38	Martin Hoosan, Muskingum county.....	3	
--	Watermelons, 2d best 6 specimens.....	87	Stephen B. Malcomb, Cleveland.....	2	
--	Cranberries, best half-peck domestic culture.....	124	A. Merriman, Granville.....	8	
--	Muskmelons, best specimens.....	86	Stephen B. Malcomb, Cleveland.....	3	
--	do 2d do.....	59	John Kelly, Cleveland.....	2	
71	Best celery.....	26	N. Maurer, Columbus.....	5	
--	Best broccoli.....	61	John Kelly, Cleveland.....	3	
--	Best turnips.....	62	John Kelly, Cleveland.....	3	
--	Best carrots.....	81	S. B. Malcomb, Cleveland.....	3	
--	Best beets.....	107	John Barnard, Zanesville.....	3	
--	Best parsnips.....	80	S. B. Malcomb, Cleveland.....	3	
--	Best onions.....	73-4-5	S. B. Malcomb, Cleveland.....	3	
--	Best cabbage.....	136-7	Michael Shilly, place not mentioned.....	5	
--	Best tomatoes.....	23	Lazel & Kiner, Columbus.....	5	
--	Best vegetable eggs.....	117	T. & W. Barnard, Belmont county.....	3	
--	Best sweet potatoes.....	5	Joseph Mock, Franklin county.....	5	
--	Best peppers.....	80	S. B. Malcomb, Cleveland.....	3	
--	do.....	44	J. Wetzel, Columbus.....	pr. rec.	
--	Best Lima beans.....	126	A. Merriman, Granville.....	3	
--	Best parsley.....	88	S. B. Malcomb, Cleveland.....	1	
--	Best squashes.....	17	J. T. Cherry, Muskingum county.....	1	
--	do.....	85	S. B. Malcomb, Cleveland.....	pr. rec.	

PREMIUMS AWARDED ON CLASS I—Continued.

COM. NO.	NAME OF ARTICLES.	ENTRY NO.	TO WHOM AWARDED.	DOLLS.	DIPLOMA.
71	Largest pumpkin	21	Moses Steddom, Warren county	3	
--	Sweet corn	68	John Kelly, Cleveland	5	
--	Best table potatoes	9	Thomas Neiswander, Franklin county	5	
--	2d do	11	G. S. Innis, Columbus	3	
--	White Neshannocks, or best table	72	S. B. Malcomb, Cleveland	pr. rec.	
--	Best seedling potato	112	John Barnard, Zanesville	do	
--	Best and greatest variety of vegetables received by exhibitor	71 to 89	S. B. Malcomb, Cleveland	10	
--	Not entered for variety, but most excellent in quality	6, 7, 11	G. S. Innis, Columbus	pr. rec.	
--	Do, as above	13	John Decker, Franklin county	do	
--	do	101	John Barnard, Zanesville	do	
--	Best lettuce	70	John Kelley, Cleveland	3	
--	Best radishes	89	S. B. Malcomb, Cleveland	pr. rec.	
--	Best salsify	31	N. Maurer, Columbus	3	
--	2d do	83	S. B. Malcomb, Cleveland	2	
--	Pie plant, fine bunch	168	S. B. Malcomb, Cleveland	pr. rec.	
--	Plate figs	123	J. P. Bruck, Columbus	do	





PRINCE ALBERT 3d—Bred by Dr. ARTHUR WATTS, of Ross county, Ohio, and now owned by Gov.
Wm. Berr, of Winnebago county, Illinois.

PEDIGREE OF PRINCE ALBERT 3d.

Bred by Dr. ARTHUR WATTS, of Ross county, O., winner of the 1st premium, and also of the sweepstakes premium, over all competitors, at the Ohio State Fair, 1851, and sold to Wm. BEBB, of Fountaindale, Winnebago county, Illinois.

Prince Albert 3d—Sire, Prince Albert 2d; dam, Lady Paxton, 2d, by Prince Charles, (2461.) (Imported by Ohio Company.) Gr. dam, Lady Paxton 1st, by Comet Hally, (1855.) Imported by Ohio Company, and sold for \$1505. Gr. gr. dam, Blossom, (imported by Ohio Company, and sold for \$1000,) by Fitz' Favorite, (1042.)

Prince Charles, (2461.) imported as above; sire, Norfolk, (2377,) dam, Spinner, by Meteor, 2d, (2305;) gr. dam, Elvira, by Barnet, (774;) gr. gr. dam, Emerald, by Meteor, (432;) gr. gr. gr. dam, Lavina, by Comet, (155;) bred by Charles Collings, and sold for 1000 guineas.

Prince Albert 2d was sired by Prince Albert 1st; his dam imported Arabella, sold with her calf to Dr. WATTS, for \$1200, in 1837; her dam Sally, (546,) by Victory. (See Herd Book.)



REPORTS OF AWARDING COMMITTEES.

CLASS A. No. 1.

REPORT OF THE COMMITTEE ON SHORT HORNS.

The Committee on Short Horns, Class A., report that they have examined all the cattle shown, and awarded premiums as follows :

Bulls, three years old and upwards—

No. 1. Arthur Watts, Ross county.

No. 2. Harvey H. Hawkins, Clinton county.

In this class were several animals of high merit, and among them, a three years old, entered by Jonathan Hadley, Clinton county, O.

Best two years old Bulls—

No. 1. A. Hawkins, Clinton county, O.

No. 2. John Hadley, Clinton county, O.

Best yearling Bulls—

No. 1. J. O. B. Renick, Pickaway county, O.

No. 2. Edward W. Vause, Ross county, O.

Best Bull Calf—

No. 1. Wm. Harold, Clark county, O.

No. 2. Isaac Hollingworth, Warren county, O.

A roan calf, entered by J. & J. Peirce, Clark county, O, commended as next.

Best Cows—

No. 1. Wm. Harold, Clark county, O.

No. 2. Michael L. Sullivant, of Franklin county, O., for Lady Seymour.

The committee notice the unusual quality of excellence in the large number of cows entered. They found much examination needful, previous to decision.

Two years old Heifers—

No. 1. David Pyle, Clinton county, O.

No. 2. Wm. D. Peirce, Clark county, O.

Yearling Heifers—

No. 1. J. O. B. Renick, of Pickaway county, for red roan. No. 38.

No. 2. Moses Steddon, Warren county.

Heifer Calves—

No. 1. Arthur Watts, of Ross county, for red and white. No. 12.

No. 2. Arthur Watts, for roan.

¶ In this class, the committee had some difficulty in deciding. A calf presented by Mr. Peirce, of Clark county, and another by Mr. Renick, of Ross county, were in close competition with those finally preferred.

JOHN H. JAMES, Urbana, O.

JAMES G. KINNAIRD, Lexington, Ky.

WILLIAM WARFIELD, Lexington, Ky.

CLASS A. No. 2.**REPORT OF THE COMMITTEE ON DEVON CATTLE.**

The committee appointed to report on, and award premiums on Devon Cattle, report that they have examined all presented for examination, and do award :

To Bulls over three years old—

1st premium, to No. 67.

2d premium, to No. 35.

Bulls over one year old—

1st premium, to No. 63.

2d premium, to No. 28.

To Cows over three years old—

To an eight year old cow exhibited in a lot of 5 cows registered as 28—

To this cow, first premium, \$30.

We do not deem it advisable to award a second premium in this lot, as there was no competition.

All of which is respectfully submitted.

ISAAC DILLON, Zanesville, Muskingum Co. O.

ALEXANDER RUFF, Xenia, O.

DENNIS McCONNELL, Chillicothe, O.

CLASS A. No. 3.

REPORT OF THE COMMITTEE ON HEREFORD CATTLE.

The committee to whom was referred the business of examining the several specimens of Hereford cattle, report that they have had but few animals of this class submitted to their inspection. The two year old bull, No. 46, and the twin heifers, No. 50, were all that were entered for exhibition. Although there was no competition, your committee are of the opinion that the bull possesses some merits as a two year old, having some very good points, and is, for the condition he is in, a tolerable good handler. They therefore recommend him to the favorable consideration of the Board.

The heifers are certainly well developed in all the peculiarities of this breed, being very fine muscled, particularly in those points best adapted for taking on flesh, and are good handlers. The committee, therefore, award to them the first premium.

The Hereford breed of cattle have long maintained a very high character for their peculiar good milking properties, and for the fine texture of their flesh, are rarely excelled by any other breed of cattle, being generally larger than the Devons, and are considered, by many distinguished breeders, superior to them for dairy purposes.

One of the committee has had experience, and has paid some attention to the Herefords, and found them equal, in all respects, with our best breeds, for working cattle.

Entertaining these views, your committee have no hesitation in recommending them to the favorable notice of breeders.

D. B. KINNEY, Oberlin, O.
ISAAC NIESWANGER, St. Clairsville, O.
JOHN HADLEY, Clarksville, O.

CLASS A. No. 5.

REPORT OF THE COMMITTEE ON NATIVE AND CROSS BREEDS OF CATTLE.

The committee selected to judge the native, and crosses between native and improved cattle, report that sixteen cows, over three years old, were entered, presenting various degrees of merit. The first premium was awarded to No. 58, a dark red cow of very fine form and milking qualities; and the second premium, to

a speckled roan, No. 75, showing much of the form of thorough bred short-horns, but not so fine capacity for milk as the other.

There were seven heifers over two years old entered, but only four exhibited. The first premium was awarded to No. 43, a white heifer which had a calf, and for her age, gave good promise of milk; and the second premium to a very fine heifer of better size and form, which gave, as yet, not strong indications of milking properties.

There were only four heifers over one year old entered, and but two exhibited. In the opinion of your committee, there was neither such competition nor decided merit, without competition, as to justify the award of premiums.

Thirteen calves were entered, and but five exhibited — two bulls and three heifers. The first premium was awarded to a red roan heifer, and the second to a white roan, both numbered thirty-seven, and both pretty highly bred grade calves.

The committee will only add, that, in their decisions, they were governed by the following considerations :

1. As the grades of cattle presented were without pedigrees, to have regard principally to the intrinsic merit of the animal, regardless of the stock to which it appeared to belong.

2. In judging of cows, to give special consideration to their capacity for milk.

3. And in judging of young bulls, to have regard to their form and feeding qualities.

All of which is respectfully submitted.

CHARLES DUFFIELD, of Louisville, Ky.
WM. BEBB, Elida, Winnebago county, Ill.
JAMES MACHIR, Circleville, O.
THOMAS HUSTON, Circleville, O.

CLASS A. No. 6.

REPORT OF THE COMMITTEE ON WORKING OXEN AND STEERS.

The committee appointed to award premiums on working oxen and steers, report as follows :

That they have discharged their duties under some embarrassment. No policeman, as was announced from the stand in the morning, to see that the animals entered for premiums were brought forward in time for examination, and to keep off a crowd of intruders. True, the committee had no difficulty in finding the

cattle embraced in Nos. 11 and 41, as these were exhibited in the yoke, connected by ropes or chains, and were not easily overlooked; No. 41, containing twelve yoke of oxen, and No. 11, ten yoke. Most of the cattle not embraced in Nos. 11 and 41, were not brought into the ring until near the close of the examination, and were then introduced, by proclamation from the committee, no officer for that purpose having appeared. The committee ought here to remark, that, aside from the want of an energetic police officer, who should have been in attendance on the committee, that the arrangement and preparation for the exhibition by the executive committee, were highly creditable, furnishing every desirable facility and convenience; and the awarding committee attribute the neglect complained of, not to the executive committee, but to the negligence and absence of the police officer assigned to this department. It is very desirable, when a large number of cattle are to be examined, that an efficient police officer should be in attendance, to protect the committee against the intrusion of a crowd of curious listeners, and officious speech-makers, respecting the merits or demerits of the animals exhibited.

But the awarding committee had to encounter a still more serious difficulty. On many of the oxen, no cards were to be found containing the number of entry, nor was any reliable source of information, in this particular, accessible. Nor did the committee obtain the information until nearly the close; in several instances, after the close of the examination. This must account for the non-compliance, by the committee, with the direction that they should report the animals "*next in merit*" to those for which premiums were awarded. This, however, is not so much to be regretted, as the animals succeeding those next in merit were so nearly equal to their predecessors that but a slight distinction could be made.

In awarding the first premium to the ten yoke of oxen embraced in the number of entry, driven from the county of Ross, the committee choose to say, that they did not arrive at that conclusion until after a tedious, repeated, and even wearisome examination of the cattle embraced in both the entries, 11 and 41, a free and full conference, and a careful comparison of opinions upon those points and qualities which are supposed to give superiority to cattle for the yoke. Form, size, symmetry of parts, the indication of muscular power and activity, with a general countenance indicating a placid, willing, and obedient disposition, are points which were well considered by the committee; nor was the fact of being handsomely matched overlooked. After a full conference and consideration of these particulars, the committee have come to the conclusion above specified.

The cattle embraced in No. 11, are in higher order, and, taken together, older than those in No. 41. It may be that, if the latter were equal in age and flesh, better judges of stock than your awarding committee might not concur in our decision.

The same remarks of comparative merit which we have submitted relating to the cattle specified in Nos. 11 and 41, may be applied principally to those entered for separate premiums; repeating that the merits of the cattle for which the first and second premiums are awarded, are so nearly equal, that it was after much tim-

spent in examination, conference, and comparison of views, that the decision was made. Indeed, most of the oxen exhibited, whose merits, according to the decision of the committee, are surpassed by those for which premiums have been awarded, are very superior cattle, and we would not be surprised if, by proper treatment and reasonable usage, they may, on a future occasion, be found to equal, perhaps surpass, in merit, their now more favored competitors.

The committee deem it proper to remark, that the oxen specified in Nos. of entry 68, 55, and 48, are very superior animals of the common stock, and evince that good judgment and laudable ambition in the owners, which, should it prevail among our farmers and stock-growers generally, would soon so improve the common breed, that it would not be long before it would be found needless to import cattle for the purpose of improvement.

Two yoke of two year old steers were exhibited, designated by Nos. of entry 44 and 72. These are very superior cattle, and the committee have awarded to No. 44 the first premium, and the second premium to No. 72, subject to the correction of the Board.

The oxen for which premiums have been awarded, are of the short horn, and crosses of the short-horn breed. It could hardly be otherwise, as, with the exception before alluded to, nearly all are of that character.

In conclusion, the committee remark, that although they expected much from this exhibition, yet the cattle exhibited and examined, far exceed, in merit, their expectations, and do credit to the owners and the State.

PLATT BENEDICT, Norwalk P. O., Huron Co. O.,
GEORGE B. HOLT, Dayton, O.,
NATHAN DUSTIN, Galena, Delaware Co., O.,
T. J. MORRIS, Spring Valley, O.,

Awarding Committee.

STATE FAIR GROUNDS,
Columbus, Ohio, September 26, 1851.

CLASS A. No. 7.

REPORT OF THE COMMITTEE ON FAT CATTLE OF ANY BREED.

COLUMBUS, Sept. 25th, 1851.

We, the undersigned, committee on fat cattle, having examined all the stock exhibited to us for competition, make the following report:

- To No. 73, we award the first premium, for the best pair of fat oxen.
- To No. 12, a premium, for the best fat bullock, five years old.
- To No. 15, a premium, for 2d best do do
- * To No. 12, a premium, for the best four year old fat bullock.

Weight of the above cattle—

No. 12, Roan	2,776 lbs.
No. 15, Red	2,654 lbs.
No. 12, Roan, four years old.....	2,482 lbs.

THOMAS H. SHELBY,
FRANCIS BERESFORD,
JESSE BUSH,
EDMUND COWLING,
JOHN CROUSE.

CLASS A. Nos. 8 & 9.

REPORT OF COMMITTEE ON GRASS FED CATTLE FOR BEEF.

Four year old steers, and upwards—

No. 29. 1 pair, 5 years old, premium awarded..... \$15 00

Four years old, and upwards—

No. 52. Premium awarded to a roan steer \$8 00

Three years old, and upwards—

No. 54. Premium awarded to a roan steer with red neck..... \$6 00

Two years old, and upwards—

No. 44. Premium awarded—light roan steer..... \$4 00

One year old, and upwards—

No. 16. Premium awarded to pided steer..... \$3 00

Grass fed cows, for beef, 5 years, and upwards—

No. 36. Premium awarded to white cow..... \$10 00

No. 40. Premium awarded to light roan cow, age unknown \$8 00

ELIAS FLORENCE, *Circleville.*

E. W. GWYNNE, *Columbus.*

A. R. SEYMOUR, *Washington, Fayette Co.*

The above committee would suggest to the State Board the formation of a class of cattle for premiums that had not been fed on corn the winter previous to exhibition.

CLASS A. No. 10.

REPORT OF COMMITTEE ON MILCH COWS.

The committee on milch cows have to report, that but one animal was entered for premium, and she a cross between native and improved stock. The exhibitor, Adams Stewart, of Columbus, presents a written and minute statement of the yield

of milk of his cow, for one year, (entirely reliable as we believe,) and which we present as a part of our report. Your committee are of opinion, that notwithstanding she was the only animal entered in this class, for premium, considering her good properties as a milker, and her fair appearance, also, for stock, she should receive the first premium as a milch cow.

SABINUS RICE, *Amesville.*

BENJ. B. BROWNING, *Springfield.*

A. B. BATTELLE, *Newport, Washington Co.*

ADAMS STEWART'S STATEMENT.

Adams Stewart's cow "Daisey," cross between native and improved cattle, calved 22d March, 1841, is exhibited to compete for the premium to be awarded to the best milch cow. The evidence of her milking properties, which I have to offer to the awarding committee, is as follows: On the 20th of April, 1848, she had her sixth calf, (being then seven years old.) On the 25th of July following, she became with calf of her seventh calf. In that year, being desirous to ascertain the quantity of milk she would yield in the year, or between calves, I adopted the following mode to find out, viz: In the month of June, I weighed the milk obtained each morning and evening, for ten succeeding days, keeping an exact account of each milking, and at the end of the ten days taking the daily average; three months afterwards, in September, I done the same; three months after that, in December, the same; and in January, I weighed six days; also in February, six days.

From these data, I proceeded to make my calculations as follows: I took for granted that from the time of calving, in April, to the time of the first weighing, in June, she gave as much milk each day as the daily average in June, as ascertained by actual weight. I accordingly counted for every day, from within four days of calving, (allowing four days for the milk to become fit for use,) to the time of weighing in June, as many pounds as the daily average in June, and then, from the first period of weighing in June, to the second period of weighing in September; I took the average of the two different weighings as the quantity per day from one period to the other, and so on to the last weighing in February; thus—say from the 24th of April, (four days after calving,) to the 10th of June, the end of the first weighing, is forty-seven days, and the daily average of that weighing being 37 pounds—

I say, 47 days, at 37 pounds per day, is.....	1,739 lbs.
At the second weighing in September, the daily average being 24 lbs.,	
I take the average between 37 and 24, which is 30 lbs. 2 oz., and	
from the 10th of June to the 10th of September, being 92 days, I	
say 92 days, at 30 lbs. 2 oz. per day, is.....	2,806 lbs.
From 24th April to 10th September, 139 days	<u>4,545 lbs.</u>

And so I continued, to the last weighing, in February; after which, I kept no account of the milk, although we continued to milk her till the 1st of April, when we quit milking, and on the 27th of April, she dropped her seventh calf.

I had made out a minute statement of each day's milking, intending to preserve it, but in several removals of my books and papers, the statement has got lost, and I can now only recollect the general result, which was somewhere in the neighborhood of an aggregate of seven thousand pounds, (7,000 lbs.) up to the 6th of February, which, by counting two pounds to the quart, gives an average of nine and a fraction ($\frac{25}{11}$, I think) quarts per day, for every day of a year of 365 days, and I felt satisfied at the time that if I had continued my account to the last, it would have made an average of ten quarts per day for 365 days.

Keeping—in winter, hay; summer, pasture; with from three to four quarts of dry bran, twice a day, all the time, just as I could procure it, sometimes very light and poor, sometimes bran and shorts mixed, also, occasionally, and irregularly, the vegetable offal of kitchen.

I do not claim for "Daisey," any extraordinary *daily* yield—five and a half gallons being the largest daily yield that has come under my observation—but I found my opinion of her as a good milch cow, upon the regular and continued milking throughout the season, and the quality of the milk, which is rich—how rich I cannot say, never having tested it, as we do not make our own butter, but use the cream for other purposes.

I have annexed a statement of ten days milking in July and September, of the present year, for the purpose of showing how I kept the account in 1848. Although the daily average may seem small, but when the age of her last calf (nine months) and the very unfavorable season is considered, I do not know but there is an average of ten quarts per day this year.

In the absence of any knowledge as to the particular evidence that might be required by the awarding committee, I submit the foregoing statement, asking the committee to give it such consideration as in their opinion it may be entitled to, and referring them to Michael L. Sullivan, Esq., President of the Ohio State Board of Agriculture, as to the credibility due to any statement made by me.

ADAMS STEWART.

COLUMBUS, Ohio, September 20th, 1851.

"DAISEY." Ten day's milking. Last calf, November 1st, 1880. Last service of bull, July 17, 1881.				Same—two months later.			
Date.	Morning.	Evening.	Daily.	Date.	Morning.	Evening.	Daily.
1881	lbs.	lbs.	lbs.	1881	lbs.	lbs.	lbs.
July 2	10	10	20	Sept. 1	5	7	12
do 3	8	10	18	2	4 $\frac{1}{2}$	5	9 $\frac{1}{2}$
do 4	8 $\frac{1}{2}$	11	19 $\frac{1}{2}$	3	4	6 $\frac{1}{2}$	10 $\frac{1}{2}$
do 5	6 $\frac{1}{2}$	9 $\frac{1}{2}$	16	4	5	6	11
do 6	6	11	17	5	5 $\frac{1}{2}$	6	11 $\frac{1}{2}$
do 7	8	11	19	6	4	5 $\frac{1}{2}$	9 $\frac{1}{2}$
do 8	7	8	15	7	5	6 $\frac{1}{2}$	11 $\frac{1}{2}$
do 9	9	11	20	8	4 $\frac{1}{2}$	6 $\frac{1}{2}$	11
do 10	3 $\frac{1}{2}$	9 $\frac{1}{2}$	13	9	5	5 $\frac{1}{2}$	10 $\frac{1}{2}$
do 11	7	9	16	10	4 $\frac{1}{2}$	6 $\frac{1}{2}$	11
			10)173 $\frac{1}{2}$				10)108
Daily average pounds			17 $\frac{35}{158}$	Daily average pounds---			10 $\frac{4}{11}$
Daily average quarts			8 $\frac{57}{158}$	Daily average quarts ---			5 $\frac{4}{11}$

CLASS A. No. 11.

REPORT OF THE COMMITTEE ON FOREIGN CATTLE.

The committee on Foreign Cattle have discharged their duty, and report the following: Aged bull, No. 62, is a roan, imported from England in 1880, by A. Stevens and J. M. Sherwood, named Earl of Seaham. This animal has, in our judgment, many remarkable fine points—back broad, smooth and even; a good loin and quarters, brisket well let down, full and swelling; light head and pliant neck; an unusually good and mellow handler; but we are compelled to say that he is not as perfect in all things as we could wish to find him. The principal and only defect we are called on to mention, is a want of fullness behind his shoulders.

We unhesitatingly pronounce this a superior animal, worthy the admiration and encouragement of all breeders of fine stock.

JAMES A. TRIMBLE, Hillsboro, Ohio,

R. R. SEYMOUR, Bainbridge, Ross county, Ohio,

W. MARSHALL ANDERSON, Chillicothe, Ohio.

CLASS A. No. 12.

REPORT OF THE COMMITTEE ON SWEEPSTAKES.

We, the committee appointed to adjudge upon and award premiums to all cattle stock as a sweepstakes, to wit: To the best bull over 3 years old; to the best 2 year old bull; to the best 1 year old bull; best bull calf; best cow over 3 years old; best over 2 years, and under 3; best over 1, and under 2; best cow calf; after examining all the stock named above, presented to us, of every grade and breed, have awarded to Arthur Watts the premium for the best bull, No. 12 in the catalogue, with the premium for the best 2 year old, No. 30; the best 1 year old bull, No. 78; the best bull calf, No. 17; the best cow, No. 9; the best 2 year old heifer, No. 26; the best 1 year old, No. 34; best heifer calf, No. 17.

We have awarded the above premiums to the improved short-horned cattle, as being the best stock over all others for beef and milk. They are fine feeders, coming to maturity earlier, at less cost and at an early age. They grow to be of fine size, and have superior form, with fine mellow hides, with more fine points and less offal when slaughtered than any other breed. There were many of this breed exhibited, superior animals, and very nearly as good in many respects as those to which the premiums are awarded, and to discriminate in what particular, would require more time than your committee can at this time take. We therefore submit the above as our report.

BEN. WARFIELD, Chairman, Lexington, Ky.,
ROBERT B. KENNEY, Lexington, Ky.,
N. C. BALDWIN, Cleveland, Ohio.

 CLASS B. No. 13.

REPORT OF THE COMMITTEE ON BLOOD HORSES.

To the Ohio State Board of Agriculture:

The awarding committee on Blood Horses report, that they award the premium for the best stallion over 4 years old to the horse "Cadmus," owned by John Irons, Warren county, Ohio, entered No. 47; and for the second best, to the horse "Marco," owned by A. Spang, Dayton, Ohio, entered No. 66.

These two horses are high-bred animals, of fine form, carriage and action. "Cadmus" is from the stock of the American Eclipse, and possesses superiority in blood, size and proportions, and also great muscular power and capability of endurance. He is only four years old. "Marco" possesses great merit for blood, action and color.

Many other fine, high-bred horses were presented to the consideration of the committee, entitled to high commendation, among which the committee would call

particular attention to the horses "Long Island," entered No. 193, owned by M. Ketchum, Morrow county, Ohio; "Chesterfield," owned by Porter, Hall & Fox, Sullivan, Ashland county, Ohio, entered No. 109. These horses are both beautiful blood bays, of high carriage and beautiful action. Seldom, if ever, was there exhibited a better display of blooded stallions.

The committee award the premium for the best brood mare over 4 years old, to the mare "Joe Gale," owned by William Miller, Pickaway county, Ohio, entered No. 122; and the premium for the second best, to the mare "Kate Philips," owned by J. W. Lomney, Dayton, Ohio. And the committee recommend that a discretionary premium be given for the mare entered No. 190, of the stock of "Sweet Briar and Post Boy," owned by E. Florence, Pickaway county, Ohio. This mare would have been entitled to the first premium, but by some accident she was detained, and did not reach the Fair till the others had been passed upon.

The committee award the premium for the best stallion horse over three years old, to the horse "Blackhawk Champion," a Morgan horse, owned by J. D. & W. H. Ladd & Co., and J. McGrew, Jefferson county, Ohio, entered No. 77; and the second premium to a Bellfounder horse, entered No. 89, owned by W. L. Miner, Franklin county, Ohio.* [No. 89 was a two year old filly. W. W. MATHER.]

"Blackhawk Champion" is a horse of great merit for action, power and movement. He is a well-bred horse of the Morgan stock—chestnut sorrel color.

Fillies over three years old.—The premium for the best is awarded to the filly "Young Spark," owned by Reber & Kutz, Lancaster, Ohio, entered No. 63, possessing much superiority in blood, size, carriage and action. And the premium for the second best, to the filly "Packolet," entered No. 78, owned by Benjamin Ladd, Jefferson county, Ohio.

Two year old Stallion Colts.—Premium for the best is awarded to the "Sherman Morgan Junior," owned by J. D. Ladd & J. C. McGrew, Jefferson county, Ohio, entered No. 79; and second premium to the colt "Russia Dunn," owned by Stephen Postle, Franklin county, entered No. 11.

Fillies over two years old.—Premium for the best to the filly "Rosette Morgan," owned by W. H. Ladd, Jefferson county, Ohio, entered No. 76; and premium for second best, to filly "Jenny Lind," Bellfounder stock, owned by W. L. Miner, Franklin county, entered No. 89.

Stallion Colts over one year old.—Premium for the best is awarded to the colt "Eclipse," owned by James Richie, Clinton county, entered No. 132; and premium

*No. 88 was a three year old stallion, and the premium was awarded to him on the committee book, marked in pencil by the committee, 89, and he was owned by David Taylor, of Franklin county, Ohio. The above mistake originated apparently in the cards being interchanged on the animals, or in confounding the numbers 88 and 89. 89 was also marked in pencil on the committee book as 88, but the entry book shows how it should be. W. W. MATHER.

for second best, to a colt owned by Michael Sullivant, Frankline county, entered No. 172.

Rarely, if ever, was there a better display of year old stallions, blood stallion colts, many of which are worthy of special notice, particularly the colt "Morgan Arab," owned by W. H. Ladd, Jefferson county, Ohio; and the colt entered No. 32, * Bellfounder stock.

Fillies over one year old.—Premium for best, awarded to the filly entered No. 191, owned by E. Florence, Pickaway county; and for second best, to filly entered No. 34, owned by W. H. Rarey, of Franklin county, Ohio.

Respectfully submitted by

T. W. BARTLEY, Mansfield, Ohio,
R. H. WILSON, Wheeling, Va.,
N. S. RUE, JR., Freehold, N. J.,
J. M. TRIMBLE, Hillsboro, Ohio,
P. VOORHEES, Dayton, Ohio,

} *Awarding
Committee.*

CLASS B. No. 14.

REPORT OF THE COMMITTEE ON HORSES OF ALL WORK.

We, the undersigned, appointed by the State Board to constitute a committee to judge and to award premiums on horses of all work, do find and award the first premium to Crim & Pearse, for horse "Top Bellfounder," entry number 61, for the following reasons:

1st. His fine size, being 16 hands high.

2d. His fine color, being a beautiful mahogany bay. The solidity of his bones—the close texture of his fibres—the bulk and substance of his tendons, and from his whole peculiar conformation. His superior style and appearance, originating from his obliquely placed shoulders—depth in the girth—deep oval quarters—broad fillets—pliable sinews—and from the superior ductility and elasticity of all his muscular appendages.

He is also possessed of fineness of skin and hair, symmetry and regularity of proportions, elegance and grandeur of all his physiological developments, together with the valuable crosses in his ancestry, being, as we are well satisfied from his pedigree, from the best thorough-bred stock in the United States.

Although we do not learn from his pedigree that he claims to be thorough bred, yet we believe him possessed of a sufficient amount of thorough blood to make him valuable for all purposes.

To No. 37, a stallion four years old, we recommend the second premium, for the following reasons:

He is a beautiful blood-bay, 16 hands high, and is possessed of a fine degree of muscular power, and considerable degree of style and appearance, making him a valuable breeding horse for all work.

[Signed]

E. BROWN, Leesburg, Highland county, Ohio,
GEORGE CREERIN, Cincinnati, Ohio,
E. McCLEARY, Harrisville, Harrison county, Ohio.

CLASS B. No. 15.

REPORT OF THE COMMITTEE ON DRAUGHT HORSES.

The awarding committee on Draught Horses report that they examined all the horses entered and exhibited (13 or 14 in number), and awarded the first premium to the black stallion "Blackhawk," No. 126, and we consider him, for size, strength and action, well worthy the premium offered by the Board.

The second premium we award to the brown horse "Duke of Cumberland," considering him well deserving the premium awarded.

Two or three of the other horses were considered very good.

A. HARLAN, Chairman, Yellow Springs, Ohio,
CHARLES E. BRAINARD,
J. S. GRIFFITH.

The committee on Draught Horses examined the geldings and mares exhibited, nine or ten in number, and consider none of them very meritorious, but award a premium to the bay horse No. 233.

A. HARLAN, Yellow Springs, O.,
CHARLES E. BRAINARD,
J. S. GRIFFITH.

CLASS A. No. 16.

REPORT OF THE COMMITTEE ON MATCHED HORSES.

The undersigned, awarding committee on Matched Horses, award the first premium of twenty-five dollars, to Jacob Egbert, of Lebanon, Warren county, for his long-tailed bays, said to be both Bellfounders. The style of these horses is very fine, and action graceful.

The second premium is awarded to Mr. R. Comstock, of Franklin county, for a pair of bays of pretty large size.

The competition was not such as was desirable, for although thirteen entries were made, but six pairs of horses were exhibited in the ring, and our choice consequently much circumscribed.

Respectfully submitted.

J. L. DOWNING, Lexington, Ky.,
 JOS. R. MCGOWAN, " "
 HORATIO J. COX, Zanesville, Ohio.

Supplementary to the above, one of the committee would suggest the propriety of assigning the different classes of horses to different rings, or rather to designate in which ring certain classes should be exhibited, as there was some controversy among committees in regard to precedence.

H. J. COX.

I concur in this suggestion. A. HARLAN, of the com. on Draught Horses.

CLASS B. No. 17.

REPORT OF COMMITTEE ON LIGHT HARNESS AND SADDLE HORSES, GELDINGS AND MARES.

Your committee, to whom were referred Light Harness and Saddle Horses, Geldings and Mares, beg leave to offer the following report :

We award the first premium to a grey gelding, No. 43, as the best light-harness horse ; combining fine form, with full size, good bone and muscle, and good action, and apparently kind in harness.

Your committee were much at a loss in awarding a 2d premium in this division ; there being several horses offered of considerable merit. We had some difficulty in selecting from Nos. 210, 87 and 138 ; but agreed to award to No. 210.

The committee would recommend to the notice of your Discretionary committee, No. 2, a promising unbroke gelding, of two years old.

SADDLE HORSES.

Your committee are much gratified to say there were several horses offered in this department specially well adapted to the saddle.

We award the first premium to No. 50. This horse, we consider, combines an unusual amount of power and endurance, with a good proportion of spirit, fine action and full size.

The 2d premium we award to No. 38 ; he being a remarkably well broke horse of excellent spirit and superior style and action.

We would invite the particular attention of your Discretionary committee, to No. 59, a cream colored horse, which might have appropriately compared with the two noticed above, but which, from some cause unknown to us, did not appear in the ring a second time, as directed. We would also mention No. 245, as a horse of merit, and No. 184, a three year old of fine size, which, by proper handling, bids fair to make a valuable horse.

LIGHT HARNESS MARES.

Your committee were favored with but one specimen under this division ; No. 226. She, however, being an animal worthy of notice, we award her the first premium.

SADDLE MARES.

Your committee beg leave to report that there was not as much competition in this class as they could have desired, but found no difficulty in awarding their premium to No. 237; being a mare of good size, fine action, with good bone and muscle.

GENERAL REMARKS.

Your committee would respectfully suggest that owners of horses often lose an award to which they might otherwise be entitled, from a want of sufficient discrimination as to the class, or division of a class, in which they would properly come in competition.

We were much pleased to observe in the horses exhibited, an increasing tendency to that full development of muscle and strong bone, which, combined with good metal and kind temper, go so far to promote that practical utility, which should be sought after as much the most desirable general characteristic of this most noble of domestic animals.

WM. H. LADD, Richmond, Jefferson co., O.

A. TOLAND, London, O.

WM. MINER, Columbus, O.

R. H. COLTON, Zanesville, O.

N. B. We would do two members of the committee injustice, if we omitted to state that they each informed the committee, when first organized, that they might be directly or indirectly interested in the award in a certain division of our class, and withdrew when the animals in these divisions were brought on the ground, the remainder of the committee obtaining good substitutes and not knowing the animals to which they alluded.

WM. H. LADD,

A. TOLAND,

WM. MINER, Columbus, O.

CLASS B. No. 18.

REPORT OF THE COMMITTEE ON JACKS AND MULES.

The committee on Jacks and Mules respectfully report, that the number of animals in this highly valuable class of domestic stock, was much less than they had anticipated, from the known extent of this branch of agriculture, to which the people of central and southern Ohio have turned their attention. Yet what few specimens attracted the notice of the committee, were superior in their kind.

The number of Jacks entered were five. To No. 186, a grey three year old, the committee awarded the first premium of \$30.

To No. 154, a black, three years and ten months old, they awarded the 2d premium of \$15.

The other 2d aged jacks on the ground, were good, substantial animals, worthy a premium, if it were in the power of the committee to award it.

The small Spanish grey jack, No. —, belonging to Mr. E. Hopkins, was especially remarked as combining great muscular power, and fine symmetry of form—deficient only in size.

There were only two Jennies found on the ground by the committee, while three entries were on the books for competition. One of these was an aged animal, No. 161, and deemed worthy the 1st premium of \$20. No. 115, was a two year old, and takes the 2d do. of \$10.

Both the above animals were considered excellent specimens of their kind.

In matched mules the competition was also limited. Two pair only were entered, but they were very good ones. To No. 113, a pair of six year old blacks, was awarded the 1st premium of \$20.

To No. 171, a pair of three and four year old, drabs, is awarded the 2d premium of \$10.

In single mules, over two years old, only three were presented. To No. 114, a remarkably large, fine four year old drab filly, is awarded the 1st premium of \$10.

To No. 160, a part two year old black, is awarded the 2d premium of \$5.

In single mules, over one year and less than two years, only two animals were offered, and they were not entered in the Committee's book, but they had on them the regular cards of the Society.* The action of the committee on these was as if every thing was regular, and found to be otherwise, they submit their proceedings thereon to the discretion of the Board. The entries will be found in pencil un-

* By authority of the President, entries were made up to the last of the Fair to accommodate those who had been detained by the Railroads, and long after the Committee Books were given out. A request in writing to the Committee accompanied the cards, requesting the said Committee to put the entry in their book and examine the article.

W. W. MATHER.

der the proper head in these pages. These were a remarkably large and handsome couple of yearling drab mules, well matched and promising, numbered 97 and 98. To No. 98 is awarded the 1st premium of \$10. To No. 97 is awarded the 2d do. of \$5.

In mule colts, the committee found one specimen only, under like circumstances as the last—marked with card No. 99. This colt was a rare animal, and judging from the amiability of its countenance, and the grace of its action, the committee would judge that its mulish propensities were exceedingly slight, and its donkey affinities but remote. But it was a mule nevertheless, and in its future career may develop the assinine obstinacy of its sire, coupled with the Xantippe grace and facinations of its own peculiar race. To this beautiful mule colt, the first prize of \$8 is awarded.

LEWIS F. ALLEN, Black Rock, N. Y.
JOHN HAUGHEY, Greene co. O.
BATTEAL HARRISON, Duff's Fork, O.

CLASS B. No. 19.

REPORT OF THE COMMITTEE ON HORSES FROM OTHER STATES.

The horses were all of superior quality, and there was much difficulty in awarding the premiums; but we think we have awarded them properly.

D. TALLMADGE, Lancaster, O.
GORDON LOFLAND, Cambridge, Guernsey Co.
GEO. CRAINE, Cincinnati.
J. W. PEIRCE, Lancaster, O.
E. HOOKER, Columbus.

CLASS C. No. 21.

REPORT OF THE COMMITTEE ON LONG WOOLED SHEEP.

The committee on long woolled sheep report:

1st premium, to entry No. 90; a superior animal for symmetry and size. His weight is 334 lbs.

2d premium, to entry No. 106, a superior animal, imported.

The committee also commend No. 76, as a fine animal for symmetry and size.

They also award the 1st premium to a lot of ewe lambs, entry No. 3, as very well bred animals.

They also commend a lot of fine ewes, entry No. 2, with which there was no competition.

JAMES McCARTNEY, Belmont co.
RICHARD COWLING, Madison co.
WM. WHITELEY, Clark co.

CLASS C. No. 23.

REPORT OF COMMITTEE ON MERINOS AND THEIR GRADES.

The committee reports, that the class of sheep brought under its inspection is highly creditable to the State; showing great skill and enterprize on the part of the contributors.

More than one hundred specimens of this valuable class of sheep were entered and inspected by your committee.

Here the committee feel it proper to remark, that the competition was so close, and the points of excellence so nearly approaching each other in the numerous competitors, that much difficulty was found in settling the question of superiority.

The committee only indulge a hope that it has been able, after exerting the best skill at its command, to approach correctness.

In awarding premiums, it has been the design of the committee to give them to those animals that combined the largest number of superior points of excellence.

Respectfully submitted.

JOSEPH BARKER, Newport P. O.,
Washington county, Ohio.
WM. SWEET, Milan, Erie county, O.
AARON JOHNSON, Somerset, Perry co., O.

CLASS C. No. 24.

REPORT OF COMMITTEE ON SAXON SHEEP.

We, the undersigned committee on Saxony sheep and their grades, after careful examination, award the 1st premium to entry No. 32; 2d premium to entry 40, as best bucks over two years old.

We must remark that entry No. 84 was equal to 32 and 40, with the exception of thickness of fleece ; but in point of firmness superior to the others. All of them of fine form and size. There were several fine sheep in the above entry, but the fleece was too thin-set, in the opinion of your committee, to be profitable to the wool-grower, and not of a very perfect form.

LEWIS TITUS, Tiger P. O., Gallia co., O.
 NATH. P. ATKINSON, Etna P. O., Licking co., O.
 ABRAHAM MILLER, do do
 ANDREW WHITELY, Springfield, O.
 SAMUEL GRIFFITH, Mt. Pleasant, Jefferson co., O.

The committee, after careful examination, award the first premium on entry No. 85, second premium on entry No. 33, as best buck under two years old.

It is proper to remark that No. 85 was a very perfect sheep, as far as it regards size, fleece and form. There were three sheep in entry No. 33, and we award the 2d premium on two lambs ; they were very fine also.

LEWIS TITUS,
 NATH. P. ATKINSON,
 ABRAHAM MILLER,
 ANDREW WHITELY,
 SAMUEL GRIFFITH.

We, the committee, after careful examination, award the 1st premium on entry No. 34, 2d premium on entry No. 63, as best pens of 5 ewes over two years old. There was but a very little difference, if any, in quality, but we considered 34 rather the heaviest fleece.

LEWIS TITUS,
 NATH. P. ATKINSON,
 ANDREW WHITELY,
 SAMUEL GRIFFITH.

The committee award the 1st premium on entry No. 64 ; 2d premium on entry No. 35, as the best pens of 5 ewes under two years old.

It is proper here to remark, that entry No. 64 was a very extraordinary lot of ewes. As it regards entries No. 35, 42, and 6, there was but a very little difference ; but there was one better sheep in entry No. 35 than in 42 or 6, and gave 35 the 2d premium.

LEWIS TITUS,
 NATH. P. ATKINSON,
 ANDREW WHITELY,
 SAMUEL GRIFFITH.

We, the undersigned committee, award the 1st premium on entry No. 65, as the best pen of ewe lambs; 2d premium on entry No. 7.

There was but a very little difference in entries No. 65, 7, and 36. It was our opinion that No. 65 was the best wool, and a very good form, but No. 7, was the largest, and very good wool.

It is proper here to remark, that we examined a great many sheep that were very fine, and probably finer than some of those we awarded the premiums to; but your committee endeavored to take form, size and fineness, and encourage the growth of sheep of the Saxony grade, that they thought, in their opinion, was the most profitable to the wool-grower.

LEWIS TITUS,
NATH. P. ATKINSON,
ABRAHAM MILLER,
ANDREW WHITELEY,
SAMUEL GRIFFITH.

CLASS C. No. 26.

REPORT OF THE COMMITTEE ON FOREIGN SHEEP—LONG AND MIDDLE WOOLED.

We, the committee on Foreign Sheep, award entry No. 110, a premium of \$5, and diploma, as best buck, middle wooled.

JACOB STIMMEL, Columbus, O.
T. HAMMORELL, Wellsburg, Brooke co., Va.
ZIBA LINDLEY, Athens, O.

CLASS C. No. 28.

REPORT OF THE COMMITTEE ON SHEEP—SWEEPSTAKES.

The limited number of long wooled sheep, would seem to require but little notice of the committee, further than that they would remark, that the buck No. 91, was a superior animal of remarkably large size, well formed, and no doubt a profitable description of sheep to raise in the neighborhood of cities, on account of their early maturity, and fine qualities for mutton and combing wools.

To buck No. 91, we award the premium, as the best of his class.

H. W. CHAPLINE, Ohio co., Va.,
ABEL McFARLAND,
JAMES F. PUGSLEY.

To buck No. 111, middle wooled, we award the premium, as in our estimation, he was a superior animal of his class ; of beautiful form, and possessing the many good qualities for superior mutton and a medium grade of carding wool. This class of sheep are of early maturity and fatten well.

H. W. CHAPLINE, Ohio co, Va.,
ABEL McFARLAND,
JAS. F. PUGSLEY.

The committee award the premium to buck No. 101, as the best merino. This buck is of the escurial family ; carries a great shearing weight of wool, of a superior kind, long in staple, well crimped and fleece compact.

We would remark, that many of the merinoes exhibited, were exceedingly objectionable ; the desire to obtain heavy fleeces having taken the precedence over all other valuable qualities of the race. Breeding sheep of any class where there is a prevalence of coarse hair or jar, we most decidedly object to. We desire to see as much wool as possible, but that no buck should be bred by the farmers of Ohio, in whose fleece coarse hairs predominate.

H. W. CHAPLINE, Ohio co., Va.,
ABEL McFARLAND,
JAMES F. PUGSLEY.

The remarks made on merinoe bucks above, will also apply to ewes examined.

To No. 86 of the Saxon sheep, the committee award the premium. The bucks exhibited under this number, were of the first class of Saxony sheep, carrying a fair weight of fleece of very superior quality.

The committee examined many superior sheep of this class, and unhesitatingly recommend their more extensive propagation.

There is an erroneous impression abroad, with regard to the constitution and general qualities of the Saxony race, which we desire to see corrected, as we believe them to be as hardy race and as profitable, as any other description of sheep.

Sheep only produce wool in proportion to their feed, and fine wool certainly sells higher than coarse.

We would remark, that we are now speaking of Saxon sheep bred with due regard to weight of wool.

ABEL McFARLAND,
JAS. F. PUGSLEY.

The undersigned, committee on sheep, under the head of "premiums open to all," having, according to their abilities, performed the several duties pertaining to their charge, beg leave respectfully to report, that they have been much pleased with the largely increased number of sheep over last year exhibited, and we fully believe that if this branch of farming receives the attention required, that in a short time Ohio will be the leading wool-growing State of the Union.

We would urge it upon all wool-growers, to select their sheep for stock purposes, with great care—to obtain as great symmetry of shape as possible; to have their fleeces fine but heavy.

The committee, in taking leave of this subject, would suggest the propriety, at future exhibitions of this variety, that all sheep of a particular breed, should be placed in pens adjoining each other. An arrangement of this kind will enable the committee to perform their duties with much more ease to themselves and satisfaction to the exhibitors.

H. W. CHAPLINE,
Wheeling P. O., Ohio county, Va.
ABEL McFARLAND,
Canal Fulton P. O., Stark county, O.
JAMES F. PUGSLEY,
Cynthiana P. O., Highland county, O.

CLASS E. No. 32.

REPORT OF THE COMMITTEE ON POULTRY.

The committee on Poultry make the following report:

Best lot of Dorkings.—Six lots entered, but could find but four—for purity, we award 1st premium to lot No. 18. Next in merit, 27.

Best lot Polands.—Seven entries—for purity of blood, 1st premium awarded to No. 8. Next in merit, 32.

Wild Turkeys.—But one lot offered; but being extra fine, would award one premium, No. 14.

Pair Turkeys.—Two lots entered—first premium, No. 25. The other lot yellow, and very fine.

Muscovy Ducks.—Two lots entered—1 premium to No. 1 (one.) Lot No. 41 so nearly equal difficult to decide, but lot No. 1 in best condition.

"Lot Distinct Breeds"—Ten entries, and from our list, would appear to apply to different varieties—a kind of sweepstake. From the numbers on our list, we award 1st premium to No. 35—Forbes' importation of Shanghai chickens—and recommend a special premium to lot No. 17, a pair of very fine large Poland Ducks, worthy of very high commendation.

Game Chickens.—Three lots entered—found but two of them—therefore award 1st premium to lot No. 31. We also found, in coop No. 3, a game chicken of superior merit, and would recommend a discretionary premium.

"Lot Silician Ducks."—Two lots offered—both very fine—but from size and condition, we award 1st premium, No. 45.

"China Geese"—One lot exhibited fully—entitled to premium, and would recommend it.

"Wild Geese."—One lot exhibited—also entitled to premium.

"Best lot Poultry, &c."—Found twelve entries, containing a very great variety of fine specimens. From the greatest variety of different distinct breeds, we award first premium to lot No. 10. The committee would recommend a special premium be awarded to No. 16—a lot of very fine white Shanghi chickens, which for their purity of color and symmetry of make, were not surpassed by any other lot. No premium being offered for that variety, we recommend one. There were also some speckled Shanghi, in same lot of Forbes' importation, worthy of notice. We would also call attention to some very fine coops of same variety, in lot No. 10—to one coop of very large uniform size of eleven months old, would recommend a diploma. Lot No. 11 also contained some very superior ones, worthy of notice.

"Discretionary."—But two lots entered—we award 1st premium to No. 15—a lot of very fine half breed wild-turkey. We would also notice, under same head, a peculiar bird, said to be a cross between a common and Guinea fowl, which would indicate to be correct. We would further remark, that from] the crowd of visitors, and neglect of having the proper entries, and the cards not being firmly fixed in their proper places, and some being fastened with the number down, there were some numbers could not be found, therefore, it may appear that some of great merit were not noticed, and to those unacquainted with the circumstances, may appear singular; we therefore submit the above report with a desire it may prove satisfactory.

The committee would suggest to the Board the propriety of having each variety to compete for the different premiums, placed as near together as possible, and that a railing be placed some four feet from the coops, that visitors may see equally as well, and the committee could examine them with much more satisfaction.

JAS. L. COX, Zanesville, O.
N. W. THATCHER, Chillicothe, O.
WM. J. THOMAS, Troy, O.

CLASS F. No. 33.

REPORT OF THE COMMITTEE ON FARM IMPLEMENTS. No. 1.

SEPTEMBER 26th, 1851.

To the Ohio State Board of Agriculture :

Your committee, to whom was given the honor of awarding the premiums on the different specimens of ploughs, would respectively beg leave to report: That the exhibition of ploughs has been very extensive, and of a very superior quality; and, in their judgment, admirably well calculated to answer the different purposes for which they are designed. Your committee would also state that they found considerable difficulty in determining which specimens were entitled to premiums; but, after much consultation and investigation, relative to their different merits, have awarded the premiums according to the best of their judgment and knowledge relative thereto:

PREMIUMS AWARDED.

No. 71	Best plough for general purposes, premium	-----	\$7 00
" 45	Best plough for clay soils, do	-----	7 00
" 123	Best plough for light sandy soils, do	-----	7 00
" 105	Best steel plough for black muck, do	-----	7 00
" 74	Best sward plough, do	-----	7 00
" 39	Best subsoil plough, do	-----	7 00
" 49	Best side hill plough, do	-----	7 00
" 82	Best one horse plough, do	-----	3 00

Your committee would like to notice, in terms of special commendation, a self-sharpening plough, No. 142, for general purposes.

SENECA LAHPAM,
LUKE S. STOW,
NEWTON LARSH,
WM. T. BEREYHILL,
S. M. NEEL.

CLASS F. No. 34.

REPORT OF THE COMMITTEE ON FARM IMPLEMENTS. No. 2.

The committee on Farm Implements No. 2, open to all, have examined three farm wagons, entered No. 1, 136 and 177, and are decidedly of the opinion, as a farm wagon, for all purposes, No. 136 is entitled to the preference, and the premium. Its coupling is one of its principal advantages, being Seeley's patent dis-

persing with king-bolt and hounds. The average price of substantial wagons of this description will not, in our opinion, when plainly and substantially constructed, exceed much, if any, forty dollars.

The committee have likewise examined three carriages, entered and numbered 144, 146, and 147. For its elegance of construction, neatness in finish, the plainness, but richness of its mounting, No. 147 is, in the opinion of the committee, unequalled by any other two horse carriage shown to the committee. We think the exhibitor of this number entitled to the premium—\$10.

The committee who examined entry number 148, being a spring wagon for the purpose of marketing. It is the only one entered for premium, and we believe the only one on the ground. It is a firm substantial wagon, well calculated to answer the purposes for which it was designed, and a premium is awarded.

The committee, in the examination of buggy wagons, were satisfied that entry No. 184 is entitled to a premium. It is on the patent of Jones' Double Reach, and it has the advantage of turning round in half the space occupied by an ordinary buggy, as the hind wheels follow in the tracks of the forward ones, as well on a curve or circle as in a straight line, and is entitled to a premium.

The committee have examined certain reaping machines, numbered 38, 114, 183 and 218. The one called McCormick's, No. 38, and Hussey's, number —, appear to the committee to combine advantages over all others to them known; but as to McCormick's and Hussey's, the committee are *divided in opinion* as to which is to be preferred, and *no premium is awarded*.

The committee have likewise examined, one mowing machine, No. 115, the only one on the ground. It is well attested, that it is a great saving of labor and expense over the old mode of cutting grass, and will do its work *equally well*, and is entitled to a premium.

Combined portable saw-mill, afterwards disposed of. The committee are doubtful whether this entry, No. 247, is within the classification submitted to them, and by arrangement, is transferred to class II. No. 53.

Committee have examined the several horse powers entered for examination, &c., and are of opinion that number 253, called Eddy's and Taplin's patent, is to be preferred, *for general purposes*, and award a premium.

The committee have examined several threshing machines and separators, &c., entered 29, 51, 92, 185, 193, and 200, and are of the opinion No. 185, called Pitts' patent, is entitled to the preference and premium.

The committee have examined No. 241, a portable saw-mill, the only one on our list. We find it to operate well, that it is useful and convenient, and award a premium.

R. WOOD,
JNO. KILER,
P. ADAMS.

CLASS F. No. 35.

REPORT OF THE COMMITTEE ON FARM IMPLEMENTS. NO. 3.

No. 117. 1 wheat drill (\$60) and broad-cast sowing machine (\$75), diploma and \$5.

No. 20. 1 wheat drill (\$50), a diploma.

No. 244. 1 do do 4 teeth, price \$20.

The committee would recommend this drill to the favorable notice of the Board, for its cheapness and simplicity, and believing it will be very generally used.

Wheat drills No. 5 (\$50), 9 (\$60), 16 (\$50), 77 (\$80), 94 (\$75), 109 (\$60), and 116 (\$85), are also recommended by the committee to the favorable notice of the Board, as being excellent machines, and well adapted to the purpose for which they are intended; and it has been with extreme difficulty the committee have been able to make a selection of those to which they have awarded premiums.

JOHN L. GILL,
A. R. CASSIDY,
JAMES MYERS,
—— GREGORY, Delaware.

No. 103. 1 two-horse cultivator, diploma.

No. 113. 1 do do diploma and \$5.

Here the committee have had a difficulty again, believing that there is the merest difference between the two machines.

JOHN L. GILL,
A. R. CASSIDY,
JAMES MYERS,
—— GREGORY.

CLASS F. No. 36.

REPORT OF THE COMMITTEE ON FARM IMPLEMENTS. NO. 4.

The committee, after having examined the various articles submitted to them, report that they award the first premium to corn-sheller (horse power) No. 159, in consequence of the speediness with which it does its work, without breaking the grain, and its price being but \$40:

Also, 1st premium to corn-sheller (hand power) No. 56. This is a cheap and simple machine, doing its work well, patented by Amsby; price \$8. We think it ought to be in the hands of every farmer.

Also, 1st premium to F. R. Elliott & Co., for straw and hay cutter, manufactured by Ruggles, Nourse, Mason & Co., of Worcester, Mass., diploma and \$3. The above is a very speedy machine to cut straw and hay, and will cut corn-stalks, but do not recommend it for that use. Price \$12.

Also, diploma and \$3 to corn-stalk cutter No. 22, of Byron Densmore, Brookport, N. Y. We can recommend the above machine to the farmer, and it is also good for straw and hay.

Also, diploma and \$3 to vegetable root cutter No. 59, F. R. Elliott, of Cleveland. The above machine will cut one bushel of potatoes per minute.

Also, diploma and \$3 to churn No. 135, J. Jones and W. Wharton Davis' patent self-adjusting churn.

Also, diploma and \$3 to A. N. Severance, for patent revolving bed and three lever cheese press, No. 195. The committee would recommend to the favorable notice of the Board his expanding and contracting cheese hoop, and we think the turning part of said hoop deserves extra consideration.

Also, diploma and \$3 to bee palace No. 180. A large number of bee hives have been exhibited to us, which are excellent; but we believe the above has the greatest combination of preventives of moth, and what we consider very important, a change of boxes with convenient feeding apertures.

Also, diploma and \$3 to washing machine No. 65. A churn dasher can be attached to this machine, which costs \$9.

Signed,

D. B. KINNEY, Oberlin,
N. B. GATES, Elyria,
J. O. B. RENICK, S. Bloomfield.

CLASS F. No. 37.

REPORT OF THE COMMITTEE ON IMPLEMENTS AND MANUFACTURED WARES, (OPEN TO ALL.)

The committee on Implements and Manufactured Wares, open to all, having made such an examination as the large number of articles offered would permit, submit the following report:

3 best grain cradles, No. 174, premium.

6 hand hay rakes, No. 178, one lot only offered. The committee do not think them entitled to a premium.

6 hay forks, No. 177, premium. Other very excellent forks were offered, and the committee saw little difference, except in timber of handles.

6 grass scythes, No. 7, premium.

6 grain scythes, No. 7, premium.

6 manure forks, No. 206, premium. Many other forks of excellent quality were offered. Those we have designated as the best, were equal in quality and superior in finish.

1 Best washboard, the committee were unable to decide, as they were almost precisely alike. If, however, the Board require a preference, we say No. 36.

6 Ohio chopping axes, No. 255, premium.

Best church bell (1 only offered), No. 11, premium.

Best steamboat bell (1 only offered), No. 11, premium.

Best and most numerous variety of agricultural implements, No. 64, premium.

A large number of useful and well manufactured articles were presented, and the committee are of opinion that this premium is particularly well deserved.

Best and most numerous variety of agricultural implements manufactured in the State of Ohio, by the exhibitor, or under his supervision, materials, workmanship, utility, durability and prices considered, No. 246, premium.

The committee recommend to the Board, that the premiums annexed be granted on the following articles :

Self-acting churn, No. 17.....	\$1 00
Apple paring machine No. 108.....	1 00
$\frac{1}{2}$ dozen axe handles, No. 19.....	1 00
Scythe snaths, No. 173.....	2 00
Shovels and spades, No. 231.....	2 00
Ox yoke, No. 172.....	2 00

A variety of other articles were offered, the names of which follow, but there being but one article of each kind presented, and those not possessing any particular claims to premiums, the committee do not recommend any, although the articles are good and the exhibitors deserve credit and commendation, and they are presented to the Board for their favorable consideration.

No. 176. Straw forks.

No. 226. Potato diggers.

No. 227. Grape vine cultivator.

No. 236. Dirt pick.

No. 223. Corn cradle for broadcast corn and lodged grain.

No. 211. Canal wheelbarrow.

No. 235. Fruit ladder.

No. 201. Glass hydraulic ram.

No. 232. Common corn hoes.

No. 179. do do do

By special direction of the executive committee, this committee examined rock-aways and buggy carriages, and awarded premiums.

No. 252. Rockaway carriage, premium, diploma.

No. 145. Top buggy, premium, diploma.

No. 101. Trotting buggy, premium, diploma.

The committee would say that several articles were exhibited by the Cuyahoga Manufacturing Company, E. N. Crittenden, agent, which, although not coming

within our province of awarding committee, we wish to say, are very deserving of commendation as articles of excellent materials and workmanship.

All of which is respectfully submitted.

P. HAYDEN,
H. WILLIAMS,
GEORGE GERE.

Columbus, Sept. 26, 1851.

CLASS F. No. 38.

REPORT OF THE COMMITTEE ON PLOWING MATCH.

The undersigned, appointed a committee on the Plowing Match, open to all, respectfully report that they entered upon the discharge of their duties, and selected both sward and stubble land for the trial of competitors for the premiums offered by the State Board of Agriculture, for the second annual fair, held at Columbus, on the 24th, 25th and 26th days of September, 1851. The committee unanimously awarded the first premium to N. French, of Detroit, Michigan, for the best plowing on both sward and stubble ground. A double plow was used by him for both kinds of plowing, of which said French is the patentee; and the committee very cheerfully recommend said plow as an implement executing better work than any other with which they have been heretofore acquainted. The second premium the committee unanimously awarded to N. B. Starbuck, of Troy, New York, for the second best plowing on both sward and stubble ground, his plow No. 5 being used, and which was very skillfully managed by Mr. B. Newby, plowman.

JOHN F. OHENOWETH, London, Madison county,
T. B. ANDERSON, Hillsborough P. O.,
H. PENNINGTON, St. Clairsville, Belmont co.,
EDWARD BISSELL, Toledo, Lucas county.

CLASS G. No. 39.

REPORT OF THE COMMITTEE ON WOOL.

The judges beg leave to report that they find the show of wool so small as to be hardly worth noticing. However, they think fleece No. 1, lot No. 86, is entitled to the first premium, being of very superior quality and well cleansed. No. 18 is very fine wool, but owing to the filthy manner in which it is put up, they think it not entitled to a premium.

The committee would respectfully recommend that the article of wool should receive more attention from the farmers of our State, as it is fast becoming one of our most important staples.

J. PAIST.

CLASS G. No. 40.

REPORT OF THE COMMITTEE ON SALT.

The committee on Salt, after a careful examination of all the lots submitted to their inspection, award the first premium of \$5 to No. 23, for the best barrel of coarse fine salt, and the second premium of \$3 to No. 23, there being two barrels of the same No. for the best fine table salt.

We also award a diploma to No. 33, as an article of superior quality of coarse salt, manufactured by Sherwood & Son, of Morgan county, Ohio, by steam evaporation.

O. T. REEVES,
DENAS ADAMS,
LEONARD SMITH, Ch'n, Troy, N. Y., } Committee.

CLASS G. No. 40.

REPORT OF THE COMMITTEE ON FLOUR OF OHIO.

The committee on Flour report :

A premium of \$5, to No. 5, manufactured at the Novelty Mills, Columbus, for the best barrel of Superfine Flour.

This flour was manufactured from four bushels and twenty pounds of wheat, well ground and bolted, and of good color, made with small *patent stones*.

Also, a premium of \$3, to No. 27, for the second best barrel of flour, manufactured by Hildreth & Lamb, of Newark, O.

This was a superior lot of flour, well ground and bolted, and made from four bushels and eighteen pounds of wheat.

Lot No. 50, manufactured by H. & D. Smith, Newark, O., on a flat French burr stone, bolted in the common bolt, and made from Mediterranean wheat, 280 pounds wheat to the barrel, leaving a surplus of nine pounds of flour. Also, one barrel, No. 50, manufactured from the Blue-stem wheat, at the same mills; 270 pounds of wheat to the barrel, leaving a surplus of 14 pounds of flour.

To No. 67, manufactured at the Ellicott mills, Knox county, O., made from four bushels and 53 pounds of White Blue-Stem; also, a superior article of flour.

To each of the above, a diploma.

Mr. Lewis Tager submitted to the committee a barrel of good flour, made from Mediterranean wheat. The barrel of flour was made from three bushels and fifty-nine and three-fourths pounds of wheat.

Product—196 pounds flour,
8½ pounds middlings,
35 pounds shorts and bran.

The flour was good, and the committee notice it as an extraordinary yield, from the quantity of wheat. The committee regret that, under the rules, they are not at liberty to award a premium.

There was also two barrels of flour submitted to the committee, by Col. R. W. Denning, of Lancaster, O., manufactured from wheat not screened or smutted, taken from a lot intended for market, which the committee thought a superior article, under the circumstances. The committee are of opinion that, had the wheat been properly cleaned before grinding, which would have improved the color, the flour would have been entitled to a premium.

There was also several other lots of flour submitted to the committee, which were of superior quality, but to which, under the rules, the committee could not award a premium.

All of which is respectfully submitted.

LEONARD SMITH, of Troy, N. Y.
O. T. REEVES,
DEMAS ADAMS.

Committee.

CLASS G. No. 41.

REPORT OF THE COMMITTEE ON BREAD, BUTTER, HAMS, &c.

The committee who have under their consideration the articles of Bread, Butter, Hams, Maple Sugar, Preserves, &c., have first found twelve or fourteen competitors for premiums on best lot of butter, of ten pounds each, and as their claims were all praise-worthy, it was with difficulty they could decide. However, No. 68 was awarded the first premium, and to No. 6 was awarded the second premium.

JOHN NOBLE,
S. PORTER, Zanesville, O.
E. BURNHAM, Millford Centre, Union Co.

There being only two lots of firkin butter presented, to No. 90 was awarded the first premium, and to No. 54 was awarded the second premium.

First ten loaves of bread, No. 7 was awarded first premium; second ten loaves, No. 78 was awarded the second premium.

JOHN NOBLE,
S. PORTER,
E. BURNHAM,

Only one lot of six hams presented to the committee were found good, and premium awarded to No. 79.

JOHN NOBLE.
S. PORTER.
E. BURNHAM.

CLASS G. No. 42.

REPORT OF THE COMMITTEE ON CHEESE.

The undersigned, appointed to examine and pass upon the various samples of cheese exhibited at the State Fair, report that they have made the following awards :

Best cheese one year old and over—

First premium to E. Matcham, of Lorain county.

Second premium to George Garlinghouse.

Best cheese under one year old—

First premium to A. Fenner, of Miami county.

Second premium to L. Lapham, of Lake county.

Best cream cheese—

Premium to Mrs. Mary Farrar, of Madison county.

Statements in writing, as required by the Executive Board, from each of the above persons, respectively, are attached to, and made a part of this report—marked, E, A, B, C, D.

Your committee beg leave to observe, that other samples of very superior cheese, for which no premium has been awarded, were exhibited, and of such the undersigned take pleasure in particularly noticing the cheese presented by R. E. Beman, of Trumbull county, and John Hale, of Cuyahoga county, whose statements, in writing, describing the manner and constituents of preparing their cheese, are attached, and made a part of this report, marked G.

SEABURY FORD,
PAUL ANDERSON,
W. DENNISON, Jr.

E.

Statement of Augustus Fenner, Miami County, O., Manufacturer of Cheese.

I milked fifteen cows, from whose milk I manufactured this cheese. The cows had good timothy and clover pasture, principally the former. The cheese was made on the 11th of June, 1851. On the previous evening, the cows were milked and the milk strained away in a cool place. On the following morning, the cream was skimmed off, and seven or eight gallons of the milk was placed in a vessel surrounded with water, for the purpose of being heated. In the meantime, the cows were again milked, and the morning's milk was strained in with the night's milk. The whole quantity of milk was about sixty gallons. After the seven or eight gallons had become heated enough, the cream taken from the night's milk was thoroughly incorporated with the heated milk. The heated milk was then turned in with the other milk, and the temperature of the whole was 90°, when it was ready for the rennet.

The liquid rennet was prepared in the following manner: To one good rennet, there was used one gallon of water and two-thirds of a pint of salt. Let the rennet lay in this pickle, frequently stirring it, four or five days. Took out the rennet, added more salt than would dissolve, strained it, kept it in a cool place, and it was fit to use. To sixty gallons of milk, took two gills of rennet. The quantity and quality was such as made the milk coagulate in about twenty-five or thirty minutes. When the milk was sufficiently coagulated for cutting, it broke smooth and easily, by pressure. It was then cut into checkers of two inches square. It stood a few minutes, when a few gallons of whey were taken off, by gently pressing a dipper down on a cloth spread on the coagulated milk. Care was taken not to remove the whey, if it looked milky. The whey taken off, it was heated for scalding purposes. As the curd hardened, it was gradually cut finer, and the whey dipped off at intervals. The curd was cut up to within one-fourth of an inch in dimensions.

Upon this was poured the heated whey sufficient to raise the temperature of the whole to one hundred and eight degrees. Having mashed all the curd fine, and mixed it thoroughly, till it was all scalded, so that there were no row particles, the whey was drawn off. The temperature was reduced to about seventy-five or eighty degrees, by adding cold water. The water was then drawn off, as much as possible, and it was ready for the salt. I used about a common tea-cup of salt to fifteen pounds of curd. After being well mixed, it was put into a press. After remaining there about six or eight hours, the cloth was changed, and the cheese again put to press, where it remained about twenty-four hours from the time it first entered it. It then was removed to the cheese-room, where it was trimmed and buttered. Here it was daily turned and buttered, for several weeks, when the intervals were lengthened, and this treatment it has continued to receive to this time.

I forgot to mention, in the proper place, the coloring. Take a piece of annitto, about the size of a rifle ball, and rub it through a rag into the milk, just at the time the rennet is added.

To sum up the whole, we have :

- 1st. 15 cows, and sixty gallons of milk.
- 2d. 38 pounds green cheese, made from one day's milk and cream.
- 3d. 31 pounds cheese, three months and two weeks old.
- 4th. The temperature at which rennet was introduced was ninety degrees, when coloring matter was introduced.
- 5th. Coagulation took place in 25 or 30 minutes.
- 6th. Scalding at one hundred and eight degrees.
- 7th. Salt, tea-cup full to 15 pounds.
- 8th. Pressing and curing.

A. FENNER, Miami Co.

A.

George Garlinghouse's Statement of Cheese-Making.

SEPTEMBER 24th, 1851.

AWARDING COMMITTEE, SIRS :

According to your request, I send you a statement of cheese-making. It is something of a trade. The number of cows, 50 milking ones. Cream, no addition. The quantity of rennet is a hard matter to come at—according to the strength of it; if good, about a pint of it to fifty pounds. The mode of preparing : Put it to soak ten or twelve hours, before using, with water or whey ; water preferred. The mode of pressure : A double lever, five or six tons weight. Treatment afterwards : Grease and turn, every day, with butter. Neither colored inside nor out, as many do.

GEORGE GARLINGHOUSE.

D.

Mrs. Farrar's Statement of Making Cream Cheese.

Four cream cheeses, 87. Mrs. Mary Farrar, Madison county. Made about Sept. 15, 1851.

Three cows. Two quarts of cream ; two quarts new milk for each cake. One tea-spoonful of rennet for each cake. When curd is turned, whey strained off, put into mould and pressed with a light pressure, about one day. Taken from press, and laid on clean timbers. Put where it will be cool, and will dry, without rubbing on other cheese.

G.

John Hall's Statement of Cheese-Making.

These two cheeses were made in June, from one day's milk of 27 cows, without the addition of cream. The rennet is prepared by being put in strong brine. I put in enough to coagulate the milk in from thirty to forty minutes—a tea-cup full, or less. I use a press patented by J. Card, of Fairport, Lake county. I grease them once and turn them every day.

JOHN HALL, Rockport, Cuyahoga Co.

F.

Rufus E. Beman's Statement of Making Sage Cheese.

Sage cheese manufactured by Rufus E. Beman, Gustavus, Trumbull county, O. It being the product of twenty-three cows, for one day, three of which were farrow, having been milked constantly for fifteen months previous, the evening's milk being run into a curd at night. Sufficient rennet applied to coagulate the milk in from 40 to 45 minutes, after which, the curd is cut with a knife, and then left to stand 25 or 30 minutes, or until the curd settles and whey begins to rise. A strainer is then thrown over it, and the whey carefully dipped from the curd until it becomes sufficiently solid to be removed to a cloth strainer, and hung up to drain, no pressure or weight being applied. It is then taken down, cut into oblong squares, and again hung up to drain; and this repeated until the whey is drained from the curd, and then permitted to hang until morning. The morning's process is the same as the evening's, except the addition of sage, which is pounded in an iron mortar, and the juice added to the milk. After the whey is extracted as above, the curd is cut with a steel knife of 18 inches in length, into cubic squares of one-half an inch, and scalded in whey at one hundred degrees of heat, and salted with pure rock salt, ground fine; one pound applied to 30 pounds of pressed cheese, or a tea-cup full to 15 pounds; and pressed in a screw press forty-eight hours.

Made in early part of June.

CLASS G. No. 43.

REPORT OF THE COMMITTEE ON HONEY AND SUGAR OF OHIO.

Several lots of honey were presented, but not all of them in the best order.

First premium awarded to No. 1.

Second premium awarded to No. 31.

Of sugar, only one lot was presented to the committee ; but it being of excellent quality, we award the first premium to No. 47.

Process of making, draining after the usual boiling.

JOHN NOBLE,
S. PORTER,
E. BURNHAM.

CLASS H. No. 48.

REPORT OF THE COMMITTEE ON NEEDLE, SHELL, AND WAX WORKS.

The entries in the department assigned to this committee exceeded one hundred in number.

Under the head of needle work, a great variety of embroidery was examined.

The entry exhibiting, in the opinion of the committee, the highest skill and taste in execution was No. 384, consisting of a worked handkerchief, collar and cuffs, by Mrs. Burr, of Mt. Vernon. The committee, besides awarding to this entry the customary premium and diploma, unanimously recommend the addition of a silver cup.

The committee also award a premium and diploma to the following entries under this head :

Entry No. 112—Centre of sofa back.

Entry No. 234—Veil. Mrs. O. Allen, Columbus.

Entry No. 544—Two dogs and landscape. Miss Dennison, of Dayton.

Entry No. 317—Greek Exiles.

Entry No. 318—A cat. Mrs. Williams, Delaware.

Entry No. 357—Various items. Mrs. W. A. King, Columbus.

Entry No. 358—Shoes. Mrs. W. A. King, Columbus.

Entry No. 375—Blankets. Mrs. E. Miner, Columbus.

Entry No. 403—Table spread. Miss Huston, Worthington.

Entry No. 373—Worked cape. Miss Cox, Zanesville.

Entry No. 528—Embroidery. Miss Waggoner, Ottawa county.

Entry No. 529—Landscape and figures. Mrs. Waggoner, Seneca county.

Entry No. 542—Landscape. Mrs. De Fleur, Columbus.

Entry No. 260—Ottoman cover. Mrs. S. A. Fell, Columbus.

Entry No. 370—Worked chair.

A great number of worked quilts were exhibited, and we awarded premiums to the following entries :

No. 167.

No. 351.

No. 397.

No. 327.

No. 411. A silk quilt—Mrs. Solis, of Columbus.

No. 365. A silk quilt—Miss Shelby, of Kentucky.

Among the miscellaneous articles were found the following, to which premiums were awarded :

Entry No. 251. A straw bonnet—Mrs. Wadsworth, of Portage county.

Entry No. 67. A lamp stand, shell work—Mrs. Luckett, Chillicothe.

A shell pyramid, number of entry not found—Miss Gregory, Columbus.

Entry No. 242. Wax flowers.

Entry No. 279. Ornamental false hair—Mrs. Hart, Cincinnati ; premium and diploma.

Entry No. 376. Case of millinery—Miss Hudson, Cincinnati ; premium and diploma.

Entry No. 276. Wax fruit—Miss Henrietta A. Miller and sisters, Kirkersville, Ohio ; premium and diploma.

The committee regret that in consequence of the great crowd, and the limited time for examination, they were not able to perform their office in a manner satisfactory, either to themselves, or, as they fear, the many competitors in this department of the exhibition. Many articles, in consequence of improper location, may have escaped their notice. They are unable, as to some of the entries to which premiums were awarded, to give the names of the exhibitors, as no label was found attached to the articles. This omission, they hope, can be supplied at the proper office.

In conclusion, the committee take pleasure in bearing testimony to the great beauty and attraction of this department of the fair. It embraced a wide range of articles of taste and utility, executed with consummate skill, and showing a wonderful fertility of design. No part of the exhibition attracted greater attention, or seemed to afford more gratification than these beautiful specimens of cultivated taste.

In behalf of the committee,

HENRY STANBERY, *Chairman.*

CLASS H. No. 50.

REPORT OF THE COMMITTEE ON PAINTINGS, DRAWINGS, &C.

The committee having in charge the duty of examining the articles enumerated in this book, have carefully performed this duty, and report, that in paintings and drawings No. 24, a cattle painting, in water colors, is entitled to the first premium, it being a native production. No. 412, in fruit painting, is entitled to the premium. No. 248, cattle drawing, is entitled to the premium. In monochromatic painting, the committee award the premium to No. 178.

In Daguerreotypes they award the premium to No. 259, being crayon Daguerreotypes. They also recommend a premium to No. 388, as fine specimens of mechanical drawing, and to No. 168, for monumental designs and drawing; and to No. 18, class H, No. 53, and which should have been placed in class H, No. 50, they recommend a premium for best specimen of painting in imitation of wood.

In sculpture, your committee recommend a premium to be given to number 131, for a bust in marble. To number 168, they likewise recommend a premium for a carved monument. No. 133, being a fine collection of well moulded figures and busts, in plaster of Paris, your committee recommend as worthy a premium.

J. SULLIVANT, *Chairman.*

CLASS H. No. 51.

REPORT OF THE COMMITTEE ON DESIGNS.

DWELLING HOUSES.

In this department of so much consequence to the comfort of the whole agricultural population of Ohio, we regret to say, that only four plans were presented, and three of those do not come strictly within the rules laid down for our guidance.

No. 218, three plans are designs calculated rather for the residence of a mechanic of some taste and of comfortable means, who may live near a village or city, than for a country farmer.

The plan and specification No. 141, from Federation, Athens county, Ohio, exhibits a comfortable dwelling, in which the space is turned to very good account.

The twelve (12) sided building, No. 120, and stables, is certainly an original, ingenious and fanciful structure, on which a gentleman of means might expend his surplus funds in a way to attract the attention of passers by.

DRYING HOUSES.

Entry No. 99, presents a very convenient, cheap and efficient building for drying fruit, now in successful use by the contriver, Mr. Charles Pontius, of Franklin county, O., with a full and complete specification.

No. 233, is a model and description of a circular drying house, with a revolving wheel, or arms on which the trays are put, and taken out or put in at a side door.

MODEL SHIP OF WAR.

This piece of work, with all sails set and guns mounted, attracted much notice among landmen, and exhibited much industry in the maker. The objects of the Agricultural Board are those of peace and internal prosperity — not the encouragement of war in any form — we do not, therefore, regard a model frigate, however beautiful or interesting as an ornament to the grounds, as a subject for premium at an Agricultural Fair.

REMARKS.

We have not awarded premiums to any of the designs or models presented, not because they are without merits, but because the rules of the Board require all plans that take premiums, to be *published*, and none of these profess *so much superiority* as to warrant a publication. This excellence can only be expected from *competition*, and when we consider how much the taste, economy, comfort and general happiness of a moral community depends upon the style and construction of the houses in which they spend their days, we are disappointed in seeing so few plans.

We sincerely hope that another year there will be more emulation in this line, among designers, house builders and house keepers.

Respectfully submitted,

C. WHITTELSEY, Cleveland, O.,
WM. O. COLLINS, Hillsboro', O.,
H. B. CURTIS, Mt. Vernon, O.,
Committee on Designs.

Columbus, September 26, 1851.

CLASS H. No 52.

REPORT OF THE COMMITTEE ON STOVES.

GENTLEMEN: Your committee on articles under the head of Class H., No. 52, beg leave to report as follows: That after a thorough examination of the various articles named in our list, that we consider the cooking stove Buckeye State, entry No. 564, as the best for wood fire.

The cooking stove known as Thether's Hot Blast, entry No. 535, as the best cooking stove for coal fire.

The Parlor Stove, entry No. 379, as the best for coal or wood fire.

We would also recommend that a diploma be awarded for good specimens of fire-front and grate, entry No. 535.

Also, diplomas for superior workmanship on articles included in entries No. 564 and 379.

Entry No. 201, as the best apparatus for warming dwellings and public buildings.

GEORGE McCULLOUGH,
C. M. RUSSELL.

CLASS G. No 53.

REPORT OF COMMITTEE ON WINES.

The committee on Wines, on tasting the samples submitted to their judgment, award—

To N. Longworth, the first premium on his sparkling Catawba of the vintage of 1849.

To N. Longworth, the second prize, on his sparkling Isabella, of the vintage of 1850.

This last wine has been in glass but six months, and is yet unripe, but is a promising one.

Mr. N. W. Thatcher presented a Catawba wine, (still,) 1850, and a wine made of a mixture of Isabella and Catawba and Cape grapes of 1850, (still.)

Mr. Cornelius Jacobs, Catawba of 1850, (still.)

Mr. J. Jacobs, also a Catawba of 1850, (still.)

Mr. P. Emerit, of Chillicothe, a Catawba, vintage not given.

Of these Catawbas, the committee placed first that of Mr. Thatcher.

Mr. Longworth presented a ladies' wine, of what made, or of what vintage, the committee is not informed. As a ladies' wine—a good one—and of its class,

deemed superior to any other wine (except Mr. Longworth's sparkling ones) exhibited. They, also, to be judged by the standard of their class, specially commended.

Mr. Charles Carpenter presented a Currant wine from Kelley's Island (formerly Cunningham's) in Lake Erie, which was deemed by the committee much the best Currant wine they ever drank. Specially commended.

AMBROSE STEVENS, *Chr'n*,

14th Street and 7th Avenue, New York city.

CLASS H. No. 51.

REPORT OF THE COMMITTEE ON CABINET WARE AND MUSICAL INSTRUMENTS.

The undersigned, committee on Cabinet Ware, beg leave to report, that they have examined with adequate care the articles entered for exhibition. The number, quality and variety of articles, were not extraordinary, and to examiners in this department, were less attractive than it may be expected to become, when the mechanics of the State enter seriously upon the purpose of showing what they can do.

In regard to the articles specified in the instructions of the Board, for which diplomas are to be awarded, the committee report, that

No. 241, entered by James Hewey, is the best dressing bureau.

No. 149, entered by I. G. Dryer & Co., is the best sofa.

No. 46, entered by Michael Halm, is the best lounge.

This lounge is a patented article, and in the opinion of the committee, worthy of particular commendation.

No. 152, entered by I. G. Dryer & Co., is the best centre table.

No. 153, entered by I. G. Dryer, is the best rocking chair.

No. 154 do do do fancy chair.

No. 47, entered by Michael Halm, is the best canopy bedstead.

No. 88, entered by A. G. Warren, best sofa bedstead.

This is a patented article, and in the opinion of the committee, a very valuable and meritorious one.

No. 64, entered by J. D. Smith, is the best billiard table. It is a cross between billiards and nine pins, and is good of its kind.

No. 263, entered by William Deltry, is the best book case.

It is obvious to your committee that additional inducements must be offered, to produce valuable competition, or to get up an exhibition of much merit, in the furniture line.

Those mechanics, however, who have brought forward articles, at considerable expense of time and money, deserve the public appreciation for their enterprise.

In addition to the articles above noticed for diplomas, there was a black walnut bureau entered by Wm. Deltry, of a pretty pattern, which attracted the attention of the committee. The black walnut bedstead for which a diploma is above awarded, was a new and rich pattern and a very handsome article.

In regard to musical instruments, there were entered two melodeons by Murch & White, of Cincinnati, made by themselves.

No. 272, superior instruments, and we recommend them to the Board ; also, a piano melodeon.

No. 273, entered by the same person, to which the same remark would apply with additional force. It is the best instrument of the kind. Recommend a diploma.

A medal was awarded by order of the Executive committee.

No. 343, a beautiful rosewood piano, 7 octave, was exhibited by J. Schneider, manufactured by himself at Cleveland. The tone of the instrument was decidedly good, and the pattern very rich and elegant. Recommend a diploma.

A medal was also awarded by the Executive committee.

Also, two pianos exhibited by G. & F. B. Machold, of Columbus, one of which was a seven octave, manufactured by Bacon & Raven of New York ; the other, a six octave, made by Hallet, Davis & Co., of Boston, both of which were good instruments — the latter being the best of the two ; they were both instruments of good tone and neat workmanship.

No. 540, three pianos exhibited by R. Reed of Columbus, one semi-grand piano, seven octave, manufactured by Jonas Chickering of Boston, the best piano on the ground.

This is one of the finest specimens of this superior kind of instrument. For brilliancy, richness and volume of tone, it cannot be surpassed. The touch is admirably even and delicate, at once producing the fulness and majesty of the organ, or the delicacy of a zephyr. For finish and workmanship it is exquisite, and in every point we feel justified in styling it the king of pianos. A cup is recommended.

Adopted by Ex. committee.

Another, a Louis XIV, horizontal piano, the most beautifully carved and finished instrument on the ground, made by Jonas Chickering of Boston. This instrument cannot be surpassed by its kind, for sweetness, richness and mellowness of tone. The touch and action is beautifully delicate and even, rendering it a most superior instrument.

The third, a *boudoir piano*, seven octave, from the factory of Lemuel Gilbert of Boston, second to none (except the semi-grand before mentioned) in its fullness, richness and depth of tone ; of excellently carved finish, and the compactness of its structure together with its various points of power, sweetness and depth of tone,

beauty of touch and excellent modified pedals, will place it in the highest ranks of musical instruments. We recommend a silver medal and diploma.

(Adopted by Executive committee)

These instrument have *all* been well tested by persons adapted to display the different qualities, and we believe them to be the best productions of the United States, and the committee recommend especially the last three mentioned pianos, to the Board.

They also take pleasure in stating, that the best melodeons exhibited, were those before mentioned as manufactured by Murch & White of Cincinnati; and that the best piano of *Ohio manufacture*, was that made by Mr. Schneider of Cleveland, before alluded to.

The committee think that the excellence of those instruments from Cincinnati and Cleveland, are such as to merit the favor of the Board.

All of which is respectfully submitted to their consideration.

A. REED,
JOHN S. HALL,
A. F. PERRY,
L. GOODALE,
A. GOODMAN.

Columbus, September 26th, 1851.

CLASS H. No. 56.

REPORT ON COOPERS' WARE.

Entry 381.	Barrels.....	premium \$3 00
Entry 344.	Tubs.....	premium 3 00

SAMUEL BARTLETT,	} Committee.
B. COMSTOCK,	
J. W. COPELAND,	

CLASS H. No. 58.

REPORT ON LARD OIL.

The report below should have been published in the fifth report of the O. State Board of Agriculture.

Attention was first called to the subject by an article in the *Ohio Cultivator*, of Nov. 15, 1851, with comments by Mr. Bateham, the former Secretary of the Board,

who stated that the report of Dr. Edwards had been in his hands, and that he had turned it over with other papers to his successor.

Having no recollection of having seen the report, the files of papers, with dates at which they had been received of Mr. Bateham, were examined, and no trace of such report found.

Dr. T. O. Edwards was written to with a view to ascertain about his report. He replied that it had been carried to the Secretary, at the Burnett House, soon after the Fair.

On the 3d of December, I received another letter from Dr. T. O. Edwards, enclosing his report on lard oil, above referred to, from which the comments in the *Cultivator*, by Mr. Bateham, are not only not called for, but show that he asserted he had received and turned over to his successor that which he had not received; or, if he received it, he had kept it, or else left it in Cincinnati; or if he did not receive it, he stated as a positive fact, that which had not happened.

The Secretary would not notice this matter, but that Mr. Bateham, on this and sundry other occasions, with as little foundation, has charged his successor with neglect of duty.

W. W. MATHER.

CINCINNATI, October 20, 1850.

JOSEPH ALLYNE, Esq.

Secretary of the Ohio State Board of Agriculture:

SIR—Yours of the 13th inst. was duly received, and in compliance with the request therein contained, and your wishes expressed during a subsequent interview, I have examined the specimen of lard oil exhibited at the State Fair.

The committee on chemicals were not provided with analytical tests on the ground, and declined giving an opinion without subjecting the various specimens there presented to such tests as would insure justice to the parties interested.

I received from you specimens No. 160, 33, 61, and 163, and subjected them to the best and fairest test—the resistance of each to cold. The trial was commenced with No. 160. An ordinary tumbler was filled two-thirds full of oil, surrounded with pounded ice, and a thermometer placed in it. Half an hour's trial convinced me of the necessity of making a refrigerating mixture; and accordingly pounded ice and salt was applied to the tumbler. This oil congealed at 16°. With the same mixture, in equal quantities of oil, the results were, No. 33 congealed at 20°, No. 61 at 14°, and No. 163 at 18°.

These experiments were performed in the presence and with the assistance of Messrs. G. H. Ketchum, Martin Nixon, and B. F. Penniman, of this city, and Mr. Martin, of Illinois, and Major Arnold, of Cuba.

Each specimen is the fairest sample of lard oil I ever beheld, and I would respectfully recommend the granting to the manufacturers of the samples that did not bear the test of 14° a diploma, and to the manufacturer of No. 61 a medal.

The specimens are yet in my possession, subject to your order.

Your obedient servant,

TOM. O. EDWARDS.

Chairman of Committee on Chemicals.

CLASS H. No. 60.

REPORT OF COMMITTEE ON AMERICAN HARDWARE.

The committee on "American Hardware, No. 2, open to all," respectfully beg leave to report, that the exhibition of articles in this line was not as complete as it should have been; the only surgical cutlery on exhibition being from the city of Columbus.

For the best pocket case of surgical instruments, the committee recommends that a diploma and \$5 be awarded to No. 100.

To No. 169, it is recommended that a diploma be awarded.

The committee is of opinion that a diploma and \$5 should be awarded to No. 24, as being the best specimens of filled teeth.

For the best set of dental instruments, the committee recommend that a diploma and \$5 be awarded to No. 66. The committee was highly pleased with the elegant finish of these instruments.

To No. 383, the committee think that a diploma and \$5 should be awarded, as the best specimens of mounted teeth.

To No. 429, the committee is of opinion that a diploma should be awarded, as the best specimens of artificial teeth.

Under the head of miscellaneous, your committee report favorably of the cutlery in entry No. 102. Of this species of cutlery, this was the only entry. A diploma and \$5 are recommended.

The pocket cutlery, No. 159, is, in the opinion of the committee, very superior, and highly creditable to American skill in this very important branch of manufactures.

The committee advise that a diploma and \$5 be awarded to this entry, 159.

No. 582. The only specimen on exhibition. The frame and mounting are ingenious, and, in the opinion of the committee, deserve a diploma.

Your committee regret that there were no entries of optical and philosophical instruments. Several establishments for the manufacture of these instruments are known to be in operation in the State of Ohio; and it is hoped that they will be better represented at the next annual exhibition.

C. C. SAMS, Hillsboro', Ohio.
S. P. HULLIHEN, Wheeling, Va.
JNO. DAWSON, Columbus, O.

CLASS I. No. 65.

REPORT OF THE COMMITTEE ON APPLES.

The committee on apples beg leave to say they are fully aware of the great difficulty of doing justice to the subject submitted to their decision. Soil and situation have such an influence upon the welfare of apples, and there are such a diversity of soils and climate in Ohio, that it is hard to determine, at this stage of pomological science, what apples are best adapted to general culture in the State. Besides there are so many varieties introduced of late, that time has not been afforded to test their merits sufficiently.

The apples, as well as the peaches, throughout the State, were destroyed nearly entirely by the severe frosts in May, with the exception of a few leagues along the Lake shore, where the vapors arising from the waters had an ameliorating influence upon the rigors of the frost. But notwithstanding, the show of fruit was quite respectable, especially under the circumstances.

McIntosh & Co., of Cleveland, exhibited 42 varieties, and J. T. Worthington seven fine specimens, which were not offered for premiums. There were several lots of foreign apples on show, among which was one brought on by Dr. Warder, from the New York State Fair, which was quite an addition to the exhibition.

The committee are pleased to find that there is being disseminated through the community correct information on the culture of the apple. The rage for foreign untried varieties, is abating, and the people, as they should do, are beginning to look up the kinds around them, which are adapted to their soil and situation.

The committee have awarded the premium on the "greatest and best variety of good table apples," to No. 47; the 2d premium to No. 139.

On the best 12 varieties of table apples, to No. 174; second do. to No. 93.

On the best six winter varieties, to Nos. 96, 97, and 98; second premium to Nos. 55 and 56.

All of which is respectfully submitted.

C. SPRINGER, *Chairman*.

P. S. — There were no seedlings offered for premiums. There were, however, several that came to the notice of the committee, but their merits were not sufficiently understood to authorize any action in relation to them.

C. S.

CLASS I. No. 66.

REPORT OF THE COMMITTEE ON PEARS.

PREMIUMS AWARDED.

1st. For greatest number of good varieties grown in the West (85 varieties), \$20 to No. 49.

2d. Second greatest number of good varieties grown in the West, Hovey's Colored Fruits and \$5 to No. 176.

Discretionary.—First fine collection of first rate autumn and winter pears, Ellwanger & Barry, Rochester, N. Y., diploma (out of State).

Second fine collection of first rate autumn and winter pears, J. Morse, of Cayuga Bridge, N. Y., diploma (out of State).

Remarks.—The committee would also mention several smaller collections of pears deserving of commendation, by (Nos. 195, —) J. McIntosh, of Cleveland, and A. Frost & Co, Rochester.

The committee also desire to express their particular admiration of the pears from Western New York, grown on quince stalks, as being superior in size, color and flavor, to those usually grown on pear stalks. The Stevens Genesee, Louise Bonne de Jersey, Van Moris Leon le Clerk, White Doyenne, and a number of newer sorts in the collection of Messrs. Ellwanger & Barry, were particularly large and beautiful.

M. B. BATEHAM, }
N. W. THATCHER, } *Committee.*

LIST OF PEARS.

- | | |
|-----------------------------|------------------------------------|
| 1. Croft Castle. | 21. Dunmore (true). |
| 2. From Judge Buell. | 22. Columbia. |
| 3. Winter Nelis. | 23. Doyenne Gris. |
| 4. Muscadine. | 24. Buerre Cadette. |
| 5. Buerre d' Aremberg. | 25. Buffum. |
| 6. Buerre Van Marum. | 26. Wilkinson. |
| 7. Frederick of Wirtemberg. | 27. Blecker's Meadow. |
| 8. Althorps Crassanne. | 28. Stevens' Genesee. |
| 9. Bartlett. | 29. Belle et Bonne. |
| 10. Tilton. | 30. Urbaniste. |
| 11. Uvidale St. Germain. | 31. Buerre Diel (true). |
| 12. Fortunii. | 32. Vert Longue. |
| 13. Foster's St Michaels. | 33. Sylvanse Bergamotte. |
| 14. Buerre Diel (false). | 34. Duchess d' Orleans. |
| 15. Catillac. | 35. Passe Colmar. |
| 16. Easter Buerre. | 36. Seckle. |
| 17. Lewis. | 37. Old Glaut Morceau. |
| 18. Chancellor (Van Mons). | 38. Chancellor. |
| 19. Marie Louise. | 39. Fulton. |
| 20. Russellette of Reims. | 40. B. d' Aremberg (from Downing). |

- | | |
|-----------------------------|----------------------------|
| 41. Kirtland. | 64. Nova Portu. |
| 42. Surpass Virgahien. | 65. Buerre Malines. |
| 43. Hacon's Incomparable. | 66. Ne Plus Muris. |
| 44. Viscompte d' Spoelberg. | 67. St. Germain. |
| 45. Quiletette. | 68. Chaumontelle. |
| 46. Compt d' Laury. | 69. Dix. |
| 47. Flemish Beauty. | 70. Fondante d' Maline. |
| 48. Passanne du Portugal. | 71. Wescott. |
| 49. Sovrein Colmar. | 72. Buerre Bosc. |
| 50. White Doyenne. | 73. Abbott. |
| 51. Thompson. | 74. Weaver. |
| 52. Leon le Clero. | 75. Pound. |
| 53. Napoleon. | 76. Princes. |
| 54. D' Louvainne. | 77. New German Pear. |
| 55. Pennsylvania. | 78. Burlinghame. |
| 56. Goer's Heathcott. | 79. Capiamont. |
| 57. Lawrence. | 80. Princes St. Germain. |
| 58. Knight's Rhode Island. | 81. Lee's Seedling Seckle. |
| 59. Eschassarie. | 82. Russette Pauache. |
| 60. Brocas Bergamotte. | 83. Chaptal. |
| 61. St. Andre. | 84. Upper Crust. |
| 62. Green Sylvange. | 85. Duchess d' Angoulem. |
| 63. Belle Lucrative. | |

CLASS I. No. 67.

REPORT OF THE COMMITTEE ON PEACHES.

The committee, after enumerating the premiums awarded, say, that of seedlings none were exhibited which were deemed worthy of a premium, except one very good late rare ripe, by S. Redfield, of Portage county, of which only 2 peaches were exhibited.

J. T. WORTHINGTON, *Chairman*.

GENERAL REMARKS.

The exhibition of peaches was not extensive, owing probably to the failure of the crop, either partial or entire, over a great part of the State. Yet many of the peaches exhibited were very fine, especially when it is considered that they were all of the *late* varieties; and although this was owing in part to the unusually warm and dry September weather in which they were ripened, yet the varieties themselves were many of them, both in appearance and flavor, such as would do credit to any exhibition, especially those exhibited by Messrs. Girty & Elliott, of Cuyahoga county.

We regret that but one good seedling variety was exhibited, as it is from them that the reputation of our peaches must be built up and sustained.*

Respectfully submitted,

J. T. WORTHINGTON,
H. STANBERY,
I. G. JONES, } Committee.

CLASS I. No. 69.

REPORT OF THE COMMITTEE ON GRAPES.

The committee, after enumerating the awards up to the native grape, say,

For "Best dish of native grapes," premium is awarded to entry No. 183, a fine dish of the Herbemont. A large number of dishes came in competition for the premium, mostly Isabella and Catawba, some of which, for beauty and size of the bunches, and fine ripening of the fruit, could not easily be excelled.

For "Best new seedling grape described." No. 189 is the only entry for this premium. There is no description. The committee are of the opinion that the grape is worthy of trial, and may prove a valuable variety.

Quite a large number of very superior specimens of the Isabella and Catawba were shown, but not entered for premium. Also, very fine specimens of the Black Hamburg, Black and White Muscadine, White, Sweet Water and Golden Chunillas, grown under glass, understood to be from Rochester, New York. For these a premium is recommended.

Considering the facility with which grapes can be grown, and the attention that is at this time actually given to their growth in Ohio, the display was not as large as could reasonably have been expected.

Mr. Nicholas Longworth, the chairman of the committee, (who, from his superior knowledge and judgment on the subject, might properly be considered the committee itself,) not being present, the undersigned can only say of their examinations and decisions, that they have acted according to their capacity.

A. A. BLISS,
MRS. SEABURY FORD,
E. N. SILL.

* This is a seedling rare ripe peach. Its most peculiar quality is its durability. It commences ripening the 20th to the 25th of August, and continues to grow and ripen for four weeks, giving fresh ripe peaches every day (from the same tree), for that length of time, thus affording time for drying without loss, &c. Its thin skin, thick meat, juicy and delicate texture, you can judge by eating. I raised the tree in Randolph, Portage county. S. BROWN.

CLASS I. No. 70.

REPORT OF THE COMMITTEE ON MELONS AND CRANBERRIES.

The committee on Melons and Cranberries, having examined those submitted to them, report, that they believe specimen of entry No. 30 was a most melting, sweet and juicy melon, and well worthy the premium awarded by the society. It is a melon of good length, and of a dark green color, and was raised, as the committee were informed, from seed obtained in the island of Cuba. The black Spanish melon, of entry No. 87, was a good one, and juicy, but on account of having been pulled too long, was a little hard, if not tough. Under other circumstances, it might have been nearer equal to the specimen approved by us. Of the class of muskmelons, the committee are of opinion that a little nutmeg melon, of entry No. 86, was the best examined by them. It was a very sweet and juicy fruit. To this they assigned the first premium. The second premium was given to a melon which the committee supposed to be an amalgamation of the cantelope and nutmeg, but do not report such to be the fact, having no information on the subject. At all events, it would have been a most delightful melon, had it been fresh from the vines. Even the third and last, of entry No. 131, was a very good specimen. The length of time which had elapsed since they were pulled, and the wilted state in which the committee found all the entries, were very much against their perfection of taste.

Of upland cranberries, the committee found the specimens handed to them a very firm, fair and racy fruit: We are pleased to give our hearty approbation to the various articles which came under the inspection.

Signed,

W. MARSHALL ANDERSON, Chillicothe, O.,
BENSON GATES, Marietta, O.,
JAMES G. KINNAIRD, Lexington, Ky.

IV.

L A W S O F O H I O

- FOR THE ENCOURAGEMENT OF AGRICULTURE.

AN ACT

For the encouragement of Agriculture.

Sec. 1. *Be it enacted by the General Assembly of the State of Ohio, That whenever thirty or more persons, residents of any county, or district embracing two counties of this State, shall organize themselves into a society for the improvement of agriculture within said county or district, and shall have adopted a constitution and by-laws, agreeably to the rules and regulations to be furnished by the Ohio State Board of Agriculture, hereinafter created, and shall have appointed the usual and proper officers; and when the said society shall have raised and paid to their treasurer, by voluntary subscription, or by fees imposed upon its members, any sum of money in each year, not less than fifty dollars; and whenever the president of said society shall certify to the respective county auditors, the amount thus paid, attested by the oath of the treasurer before a magistrate, it shall be the duty of the said county auditors, embraced within the district in which such society shall be organized, to draw an order on the treasurer of the respective county, in favor of the president and treasurer of said society, for a sum equal to the amount thus raised; provided it does not exceed half a cent to each inhabitant of the said county, upon the basis of the last previous national census, but not to exceed in any county the sum of two hundred dollars; and it shall be the duty of the treasurer of the said county to pay the same.*

Sec. 2. *That it shall be the duty of the several county or district societies which may be formed under the provisions of the preceding section, during the continuance of this act, annually to offer and award premiums for the improvement of soils, tillage, crops, manures, implements, stock, articles of domestic industry, and such other articles, productions and improvements, as they may deem proper; and may perform all such acts as they may deem best calculated to promote the agricultural and household manufacturing interests of the district and of the State; and it shall also be their duty, so to regulate the amount of premiums and the different grades of the same, as that it shall be competent for small as well as large farmers to have an opportunity to compete therefor; and in making their awards, special reference shall be had to the profits which may accrue, or be likely to accrue, from the improved mode of raising the crop, or of improving the soil, or stock, or of the fabrication of the articles thus offered, with the intention that the premium shall be given for the most economical mode of improvement; and all persons offering to compete for premiums, on improved modes of tillage, or the production of any crops, or other articles, shall be required, before such premium is adjudged, to deliver to the awarding committee, a full and correct statement of the*

process of such mode of tillage or production, and the expense and value of the same, with a view of showing accurately, the profits derived or expected to be derived therefrom.

SEC. 3. It shall be the duty of each county or district society, to publish annually a list of the awards, and an abstract of the treasurer's account, in a newspaper of the district; and to make a report of their proceedings during the year, and a synopsis of the awards for improvements in agriculture, and household manufactures, together with an abstract of the several descriptions of those improvements, and also make a report of the condition of agriculture in their county or district, which reports shall be made out in accordance with the rules and regulations of the Ohio State Board of Agriculture, and shall be forwarded to the State Board at their annual meeting in December, in each year: and no subsequent payment shall be made from the county treasury, unless a certificate is presented to the auditor from the president of the State Board, showing that such reports have been duly made.

SEC. 4. That Michael L. Sullivant, and Samuel Medary, of Franklin county; Allen Trimble, of Highland; Samuel Spangler, and John Chaney, of Fairfield; Darius Lapham, of Hamilton; John B. Bayless, of Jefferson; Greenbury Keen, of Portage; Simon Perkins, of Summit; John I. Vanmeter of Pike; Arthur Watts, and Felix Renick, of Ross; Elias Florence, and William Gill, of Pickaway; Jared P. Kirtland, of Cuyahoga; David Gregory, of Delaware; John McElderry, of Tuscarawas; Isaac Moore, of Lake; John Fuller, of Erie; George W. Gibbons, of Muskingum; Horatio Gillett, of Lawrence; Ansen Howard, of Champaign; John Eckles, of Hancock; Ziba Lindley, Jr., of Athens; Henry C. Brish, of Seneca; Samuel Myers, of Crawford; David Stevens, of Richland; John Martin, of Columbiana; Gilman C. Mudgett, of Paulding; L. C. Goble, of Putnam; Isaac Neiswanger, of Belmont; Aaron Johnson, of Perry; William McFadder, of Harrison; Frederick Bonner, of Greene; Jacob T. Pugsley, of Fayette; George W. Cowden, of Trumbull; Billius Kirtland, of Mahoning; Richard Warner, of Medina; John M. Milligen, and Absalom Dunn, of Butler; John Johnson, of Miami; Jesse Wilson, of Shelby; Abraham Studdebaker, of Darke; Joseph Burns, of Coshocton; James L. Reynolds, of Stark county; Newton Larsh, of Preble; A. E. Strickle, of Clinton; Benjamin Ruggles, of Belmont; Henry Protzman, of Montgomery; William R. Putnam, Jr., of Washington; James Loudon, of Brown; Dowty Utter, of Clermont, and Beaty McFarland, of Jefferson county, be, and they are hereby created a body corporate, with perpetual succession, in the manner hereafter described, under the name and style of the "Ohio State Board of Agriculture."

SEC. 5. It shall be the duty of said Board, or any ten of them, to meet in the city of Columbus, on the first Wednesday of April, after the passage of this act, and to organize by appointing a president, secretary and treasurer, and such other officers as they may deem necessary; also determine by lot, the time that each member shall serve, so that the term of service of one-half of the members shall expire, annually, on the day of the annual meeting in December; and the president shall have power to call meetings of the Board whenever he may deem it expedient.

SEC. 6. There shall be held, in the city of Columbus, on the first Wednesday after the first Monday in December, an annual meeting of the Ohio State Board of Agriculture, together with the president of each county Agricultural Society, or other delegate therefrom, duly authorized, who shall, for the time being, be ex-officio members of the State Board of Agriculture, for the purpose of deliberation and consultation, as to the wants, prospects and condition of the agricultural interests throughout the State; and at such annual meeting, the several reports from the county societies shall be delivered to the president of the Ohio State Board of Agriculture; and the said president and delegates shall, at this meeting, elect suitable persons to fill all vacancies in the Ohio State Board of Agriculture.

Sec. 7. And it shall be the duty of said Board to make an annual report to the General Assembly of the State, embracing the proceedings of the Board for the past year, and an abstract of the proceedings of the several county agricultural societies, as well as a general view of the condition of agriculture throughout the State, accompanied by such recommendations as they may deem interesting and useful.

Sec. 8. That the act to authorize and encourage the establishment of agricultural societies in this State, and for other purposes therein set forth, passed March twelfth, one thousand eight hundred and thirty-nine, be, and the same is hereby repealed; provided, the acts done, obligations incurred, and rights acquired, under the provisions thereof, shall remain in no wise altered or affected by this act.

ELIAS F. DRAKE,

Speaker of the House of Representatives.

SEABURY FORD,

Speaker of the Senate.

February 28, 1846.

AN ACT

To amend an act entitled "An act for the encouragement of Agriculture," passed February 27th, 1846.

Sec. 1. *Be it enacted by the General Assembly of the State of Ohio,* That the "Ohio State Board of Agriculture," shall consist of ten members, five of whom shall constitute a quorum.

Sec. 2. That Allen Trimble, M. L. Sullivant, Samuel Medary, Darius Lapham, A. E. Strickle, Arthur Watts, M. B. Bateham, John Coddington, Jared P. Kirtland and Isaac Moore, be continued members of the Board, the term of service, and the mode of appointing their successors to remain unaltered by this act.

Sec. 3. That the sum of *two hundred dollars* be and the same is hereby appropriated from the treasury for the use of the Board; and an account of the expenditures of the Board shall be included in the annual report of the Board to the General Assembly.

Sec. 4: So much of the law to which this is an amendment, as conflicts with the provisions of this act is hereby repealed.

WILLIAM P. CUTLER,

Speaker of the House of Representatives.

EDSON B. OLDS,

Speaker of the Senate.

Passed February 8th, 1847.

AN ACT

To create a permanent Agricultural Fund for the State of Ohio.

Sec. 1. *Be it enacted by the General Assembly of the State of Ohio, That there shall be created, from the several sources hereinafter mentioned, a fund which shall be known as the "State Agricultural Fund."*

Sec. 2. That the minimum amount authorized to be charged by county auditors for permits, under the law passed February twenty-eighth, one thousand eight hundred and thirty-one, entitled "an act to regulate public shows," shall be, and is hereby increased to twenty dollars, and that one-half the revenue in each and every county, derived from such source, be set apart to the "State Agricultural Fund," to be paid over by the county Treasurer, to the Treasurer of State, at their settlements with the Auditor of State, as other moneys collected for that purpose now are; and that the other half remain, as now provided by law, for the use and benefit of the common school fund.

Sec. 3. That whenever any real or personal property shall escheat to the State, under the eighth and ninth sections of an act entitled "an act regulating descents and the distribution of personal estates," passed February twenty-fourth, one thousand eight hundred and thirty-one, and all such as have heretofore so escheated under the provisions of said law, and which have not been taken possession of under the law entitled "an act concerning escheated lands," passed February 25th, one thousand eight hundred and thirty-three, shall be taken possession of in the name of the State, by the county auditor of the county in which such property may be found, and by him sold at public auction, at the county seat of such county, to the highest bidder, after having given thirty days notice of such intended sale, in some newspaper printed within the county.

Sec. 4. The Court of Common Pleas shall, on the application of the county auditor, appoint three disinterested freeholders of the county to appraise such real property, who shall be governed by the same rule as appraisers in sheriffs' or administrators' sales; and the Auditor shall sell such property at not less than two-thirds of its appraised value, and may, at his discretion, sell the same for cash, or for one-third cash, and the balance in equal annual payments; the deferred payments to be amply secured; and, upon the payment of the whole amount of consideration money, shall execute a deed to the purchaser, in the name and on behalf of the State of Ohio.

Sec. 5. All moneys arising from sales made under this act, shall be paid over by the county auditor to the treasurer of the county, to be by him accounted for and paid into the State treasury at his annual settlement with the Auditor of State, as other moneys collected for State purposes, for the use and benefit of the "State Agricultural Fund."

Sec. 6. The fund hereby created shall be at the disposal of the State Board of Agriculture, for the improvement of the agricultural interests of the State, in such manner as they may deem most conducive to that object, until otherwise provided for by legislative enactment; and shall at all times be held subject, upon such property being legally reclaimed by any heir, to the payment to the purchaser of the State, of the original purchase money, and legal interest, to the time of such reclamation.

(Sections seven to ten, inclusive, relate to the use of escheated lands in the city of Cincinnati, for the benefit of a "house of correction," established there.)

Sec. 11. All acts and parts of acts inconsistent with this act, are hereby repealed.

WILLIAM P. CUTLER,
Speaker of the House of Representatives.
EDSON B. OLDS,
Speaker of the Senate.

Passed February 8th, 1847.

AN ACT

Further to amend an act entitled "an act for the encouragement of Agriculture," passed February 27, 1846.

Sec. 1. *Be it enacted by the General Assembly of the State of Ohio,* That the Ohio State Board of Agriculture shall have the power to audit and pay the ordinary expenses of the Board, including the necessary personal expenses of members in their attendance on not more than three meetings in any one year, out of any funds now in their hands, or that may arise under the provisions of the "act to create a permanent agricultural fund in the State of Ohio, and for other purposes," passed Feb. 8, 1847; and it shall be the duty of the Board, in their annual report, to state the names of the persons to whom any payment is made under this act, and the amount paid to each.

Sec. 2. This act to take effect from and after its passage.

(Signed,)

JOSEPH S. HAWKINS,
Speaker of the House of Representatives.
CHARLES B. GODDARD,
Speaker of the Senate.

Passed February 18, 1848.

LAW RELATING TO PUBLIC SHOWS.

AN ACT

To amend the act entitled "An act to regulate public shows," passed February 28, 1831.

Sec. 1. *Be it enacted by the General Assembly of the State of Ohio,* That so much of the first section of the act to which this is an amendment, as provides that it shall not be necessary for any exhibitor or exhibitors of any show allowed to be exhibited by said act, to obtain a permit from the county auditor, to show or exhibit in any incorporated town or city, where by the laws or ordinances of such town or city, such exhibitor or exhibitors may be required to obtain a permit or license from the municipal authority of said town or city, be and the same is hereby repealed.

Sec. 2. Before any person or persons shall be permitted to exhibit any public show, in any incorporated town or city in this State, he or they shall first be required to obtain a permit from the auditor of the county in which such town or city may be located, according to the provisions of the act to which this is an amendment, and the act to create a permanent agricultural fund, passed February 8th, 1847, and all moneys paid into the treasuries of the several counties under the provisions of this act, shall be paid over and disposed of according to the provisions of the act last above named.

Sec. 3. Nothing in this act shall be construed to interfere with the right or power of any incorporated town or city in this State, to impose a license upon all shows exhibited in such town or city in addition to that imposed by this act.

JOHN G. BRESLIN,

Speaker of the House of Representatives.

BREWSTER RANDALL,

Speaker of the Senate.

Passed March 21, 1849.

EXPLANATIONS.

The law to which the foregoing is an amendment, says :

"That before any exhibitor or exhibitors of any traveling public show, not already prohibited by law, shall be allowed to exhibit or show any natural or artificial curiosity, or exhibition of horsemanship in a circus or otherwise, for any price, gain or reward, he or they shall apply to the county auditor of the county in which he or they intend to show or exhibit, for a permit ; and the county auditor shall give him or them a permit, specifying the time, place or places he or they may be allowed to show or exhibit in the county, on the person or persons thus applying, paying into the county treasury the amount said county auditor may assess on him or them, for the privilege of exhibiting or showing such show ; which assessment shall, in no case, exceed fifty dollars, nor less than ten, for each and every place at which such show shall be exhibited : Provided, it shall not be necessary for any exhibitor or exhibitors, as aforesaid, to obtain a permit from the county auditor, to show or exhibit in any incorporated town or city, where, by the laws or ordinances of such town or city, such exhibitor or exhibitors may be required to obtain a permit or license from the municipal authority of said town or city."

The act for creating a permanent agricultural fund, passed February 8, 1847, provides that the minimum amount authorized to be charged by county auditors for permits under the law of 1831, shall be increased to twenty dollars; and one half of the income derived from this source shall go to the agricultural fund—the balance to the common school fund as before. But this act, as well as that of 1831, had no effect in incorporated towns and cities; and it was only in a few cases that county auditors were called on to grant licenses for such shows; while the authorities of towns and cities were by law allowed to charge a small or large sum, or nothing at all, as they might see fit, and make such disposition as they pleased of the revenue derived from this source. Thus, it will be seen that the objects of the law of 1847 were not secured; and hence the reasons for the additional law of the present year.

This law does not interfere with the rights of incorporated towns and cities; but it makes it imperative on the exhibitors of public shows to first obtain a permit from the county auditor, in all cases; then, if the town or city ordinances require it, another permit must be obtained from the authorities of such town or city. Some persons may think that these laws impose too heavy a tax on such exhibitions; but we think that a large majority will agree that it will be no loss to the morals of community even if the effect should be a reduction of the number of these exhibitions in our State.

NOTE.—The penalty for violating the law, by exhibiting without proper license, is a fine of one hundred dollars for each offence.

INSTRUCTIONS

FOR THE FORMATION AND MANAGEMENT OF COUNTY AGRICULTURAL SOCIETIES.

The following extracts from the law, in reference to county societies, and the rules of the Board on the same subject, are appended to this report, for the convenience of those who may be concerned in the organization or management of such societies.

THE LAW "For the encouragement of Agriculture," passed February 27, 1846, provides :

S^{EC}. 1. That whenever thirty or more persons, residents of any county, or district embracing two counties of this State, shall organize themselves into a society for the improvement of agriculture within said county or district, and shall have adopted a constitution and by-laws, agreeably to the rules and regulations to be furnished by the Ohio State Board of Agriculture, hereinafter created, and shall have appointed the usual and proper officers; and when the said society shall have raised and paid to the treasurer, by voluntary subscription, or by fees imposed upon its members, any sum of money in each year not less than fifty dollars; and whenever the president of said society shall certify, to the respective county auditors, the amount thus paid, attested by the oath of the treasurer before a magistrate, it shall be the duty of the said county auditors, embraced within the district in which such society shall be organized, to draw an order on the treasurer of the respective county, in favor of the president and treasurer of said society, for a sum equal to the amount thus raised; provided, it does not exceed half a cent to each inhabitant of the said county, upon the basis of the last previous national census, but not to exceed, in any county, the sum of two hundred dollars; and it shall be the duty of the treasurer of the said county to pay the same.

S^{EC}. 2. That it shall be the duty of the several county or district societies which may be formed under the provisions of the preceding section, during the continuance of this act, annually to offer and award premiums for the improvements of soils, tillage, crops, manures, implements, stocks, articles of domestic industry, and such other articles, productions and improvements, as they deem proper; and may perform all such acts as they may deem best calculated to promote the agricultural and household manufacturing interests of the district, and of the State; and it shall also be their duty, so to regulate the amount of premiums, and the different grades of the same, as that it shall be competent for small as well as large farmers to have an opportunity to compete therefor; and in making their awards, special reference shall be had to the profits which may accrue, or be likely to accrue from the improved mode of raising the crop, or of improving the soil, or stock, or of the fabri-

cation of the articles thus offered, with the intention that the premium shall be given for the most economical mode of improvement; and all persons offering to compete for premiums on improved modes of tillage, or the production of any crops or other articles, shall be required, before such premium is adjudged, to deliver to the awarding committee a full and correct statement of the process of such mode of tillage or production, and the expense and value of the same, with a view of showing accurately the profits derived or expected to be derived therefrom.

SEC. 3. It shall be the duty of each county or district society, to publish annually, a list of the awards, and an abstract of the Treasurer's account, in a newspaper of the district, and to make a report of their proceedings during the year, and a synopsis of the awards for improvements in agriculture, and household manufactures, together with an abstract of the several descriptions of these improvements; and also make a report of the condition of agriculture in their county or district, which reports shall be made out in accordance with the rules and regulations of the Ohio State Board of Agriculture, and shall be forwarded to the State Board at their annual meeting in December in each year. And no subsequent payment shall be made from the county treasury, unless a certificate is presented to the auditor from the President of the State Board, showing that such reports have been duly made.

[Sections 4 and 5, appoint the State Board of Agriculture.]

SEC. 6. There shall be held in the city of Columbus, on the first Wednesday after the first Monday in December, an annual meeting of the Ohio State Board of Agriculture, together with the President of each county agricultural society, or other delegates therefrom, duly authorized, who shall, for the time being, be *ex officio* members of the State Board of Agriculture, for the purpose of deliberation and consultation as to the wants, prospects, and condition of the agricultural interests throughout the State; and at such annual meeting the several reports from the county societies shall be delivered to the President of the Ohio State Board of Agriculture; and the said President and delegates shall, at this meeting, elect suitable persons to fill all vacancies in the Ohio State Board of Agriculture.

SEC. 7. And it shall be the duty of the said Board to make an annual report to the General Assembly of the State, embracing the proceedings of the Board for the past year, and an abstract of the proceedings of the several county agricultural societies, as well as a general view of the condition of agriculture throughout the State, accompanied by such recommendations as they may deem interesting and useful.

RULES,

Adopted by the Board at its first meeting, for the organization and management of county or district societies. [These rules should form the basis of the constitutions of the societies.]

1. *The Officers* of the society, shall consist of a President, Vice President, Treasurer, Secretary and five managers; who, together, shall constitute a Board of Directors, for the general management of the affairs of the society; they shall be elected annually by the members of the society, and hold their offices until their successors are appointed.

2. *Members of the Society* must be residents of the county or district, and pay the sum of *one dollar* annually to the Treasurer.

3. *Competitors* for premiums must be members of the society.

4. *A list* of the articles for which premiums are to be awarded by the society, must be published in a newspaper or in handbills, at least one month previous to the day of exhibition.

5. *All articles offered for premiums*, must be owned by the persons offering the same, or by members of their families; and products of the soil, or manufactured articles, must be produced or manufactured within the county or district.

6. *Awarding Committees*, of three persons each, shall be annually appointed by the directors of the society, for judging the different classes of articles offered in competition, and awarding premiums for the same.

7. The awarding committees must comply with the provisions of the law, requiring competitors for premiums on crops, and other improvements, to furnish full and correct statements of the process and expense of culture and production, &c.

8. *Competitors for premiums on crops* shall be required to have the ground and its produce accurately measured by not less than two disinterested persons, whose statements shall be verified by affidavit. [See the premium list where this requirement is modified.]

9. Premiums on grain and grass crops shall not be awarded for less than *one acre*, and on root crops, not less than *one-fourth of an acre*; the whole quantity produced on the amount of land specified shall be measured or weighed; root crops to be estimated by weight, (divested of the tops,) 60 pounds to be considered a bushel; and grain crops to be measured or weighed according to the usual standards; the rules in relation to other crops and productions, to be agreed on by the directors of the society.

10. *The annual exhibitions* of the societies, must be held at some period between the 1st day of September, and the 1st day of November; the premiums on crops can be awarded at a later period, if thought necessary.

REPORTS OF SOCIETIES.

The Board adopted the following rules for the guidance of societies in preparing the reports required by the 3d section of the law, to be made annually to the Board at its meeting in December. The report shall embrace—

1. A copy of the printed list of premiums offered and awarded by the society, together with the abstract of the Treasurer's report, as required by law to be published.

2. The statement of competitors for premiums on crops, and other improvements, detailing the mode of tillage, or process of the improvements, &c.

3. A report by the President and Secretary, giving a general account of the proceedings of the society, the number of its members and the prospects of its progress and usefulness, &c.

4. A statement of the principal kinds of agricultural productions of the county or district, and as far as practicable, the aggregate amount of the same ; also the average yield per acre, of the principal crops for the past season ; the value or a current price of the products in market, together with the towns or places where principally marketed, and such other information as may aid the State Board in preparing a statistical statement of the products of such county or district.

REPORT OF THE CORRESPONDING SECRETARY,

TO THE OHIO STATE BOARD OF AGRICULTURE.

Gentlemen of the State Board of Agriculture:

At your annual meeting on the 6th of December, 1850, the duties prescribed for the Corresponding Secretary were as follows:

“That it shall be the duty of the Corresponding Secretary to carry on a correspondence with the several County Societies auxiliary to the Board, and the Agricultural, Horticultural, Mechanical and Scientific Associations of other States and countries, and with individuals, so far as the same may contribute to the advancement of the interests the Board have in charge. Also, to encourage the introduction into the State of new varieties of stock, seeds and implements; to visit the several counties of the State, from time to time, and lecture on the subject of Agriculture; and prepare papers on the agricultural and mineral resources of the State. He shall take charge of, and preserve or distribute, as the Board may direct, all seeds, books, plants, models, &c., that may be transmitted to the Board; and shall also have charge of all communications designed for publication, and shall arrange the same for the Annual Report to the Legislature, under the direction of the Executive committee.

He shall have charge of the office in Columbus, and shall reside in said town, in order that the whole of his time shall be given to the duties of his office.”

The undersigned has labored hard to discharge as many of the duties prescribed, and others necessarily incident to the office, as he could, but has not had the time to travel much over the State, to lecture to the counties on the subjects connected with agriculture, nor to prepare such lectures. The soils of some counties have been analyzed, under my direction, by Prof. David A. Wells, of the Lawrence Scientific School, at Cambridge, Massachusetts, and they have been done in the best manner by one of the best analysts in our country. No labor nor expense has been spared to make them perfect, and the results may be relied on. Several counties have applied for the collection of their soils, and have made the appropriation required by the Board, and the collections and analyses will be made as soon as the Secretary can be absent for a few days at a time from the office.

Remarks upon the geology of the counties examined, the origin of their soils and agricultural capabilities, &c., will be found in this report; and still more general ones in the essay on the soils of Ohio, subjoined to this report.

Seeds have been received from the United States Patent Office, and distributed in small parcels among the agriculturists in various parts of the State, and in due time the results of the cultivation and adaptation of these grains and grasses, will be made public in the Annual Reports of the State Board.

The labors and duties of the office of the State Board of Agriculture have now been so systematized and arranged, that if the necessary appropriation of \$300 to \$500 was made for a laboratory, the analysis of soils and plants could be made by the Secretary.

It may well be supposed, from the following abstract, that the time of the Corresponding Secretary has been fully occupied, and that it was impossible to accomplish all the objects the Board contemplated by the labor of one man.

Abstract of the Labor done in the Office of the Ohio State Board of Agriculture.

Letters of correspondence sent to various Agricultural and Horticultural Associations and Societies, (not county societies) and to various individuals on matters connected with the State Board of Agriculture ..	493
Statistical Circulars sent to counties that had not reported in December last	29
Certificates to enable county societies that had reported according to law, to draw their proportion of funds from the county Treasury....	40
Circulars in reference to the analysis of soils, as provided for by the Board	50
Circulars and letters to Committee men and ladies appointed as Judges at the State Fair.....	356
Letters about printing plate of Fair Grounds.....	8
Notices of distribution of Premium Lists	6
With packages of bills for sale of Lumber.....	58
With County Diplomas, sent as specimens to county Societies	50
Circulars of the Patent Office	27
Circulars to officers of county Agricultural Societies, about Annual Meeting	266
Letters and circulars.....	9
Letters and circulars to members of the Board.....	10
Pages of matter of Fifth Report, prepared for press, and twice corrected for each of two editions, viz., Senate and House reports.....	800
Pages of Premium List, copied and prepared,	40
Survey of the Fair Grounds and platting and preparing the plate, and distributing the stereotypes of the same executed.....	
Soils of two counties collected, from 19 localities.....	19
Soils for two others, from 6 localities	6
County Diplomas packed and sent in small parcels, to 29 County Agricultural Societies, some by express, some by mail, some by stage, and two parcels by private conveyance	1,900

Richland	100	Franklin	100
Greene	25	Ashland	19
Warren	25	Logan	63
Portage	65	Belmont	63
Clermont	80	Monroe	50
Licking	100	Clinton	155
Delaware	43	Ross	25
Crawford	40	Coshocton	25
Union	100	Tuscarawas	100
Muskingum	100	Jefferson	50
Lorain	35	Carroll	50
Geauga	50	Miami	13
Trumbull	20	Fayette	48
Wayne	125	Huron and Erie	70

Pomological Reports in packages	200
Pomological Reports sent to individuals	200
Copies of Fifth Report of Board sent to individuals	200
Bound copies of the Fifth Report of Board to Board and to County and State Agricultural Societies, and delegates	220
Premium Lists were corrected in the office, by hired labor, by resolution of the Executive Committee	8,000
Premium Lists mailed, by hired labor, to manufacturers in various parts of the United States, and names hunted up by hired labor	800
Poster bills distributed from the office in single bills and packages, over the State	500
Poster bills sent by mail to every Post Office in Ohio	1,600
Premium Lists distributed in packages from the office to the different counties	8,000
Premium lists sent by mail directed to manufacturers in Ohio and other States, each in a separate envelope	800
Premium Lists sent by mail, as above, to the Judges for the State Fair,	356
Premium Lists distributed to individuals, from the office, at sundry times	500
Premium Lists distributed from office at the Fair	200
Packages of seeds distributed among farmers, that will test their adaptation for the soil and climate of Ohio	80
Diplomas filled out and issued—many of them sent by mail	260
Forms for circulars, posters, bills, and advertisements, synopses prepared	40
Kinds of Cards prepared to be printed for the Fair	78

TABULAR Statement of Letters written to State Agricultural, Horticultural, Mechanical and other Societies, for the year, from December 10, 1850, to December 10, 1851.

TO PUBLIC BODIES :

United States Patent Office	5	Michigan	1
New York	8	Wisconsin	1
Massachusetts	2	Russia	2
Pennsylvania	1	Canada	1
Vermont	3	Cincinnati Horticulturol Society	1
Rhode Island	2	Massachusetts Horticultural Society,	1
Kentucky	4	Ohio Board Public Works	7
Maryland	2	Railroad Companies	12
Indiana	3		

TABULAR STATEMENT— *Continued.*

COUNTY AGRICULTURAL SOCIETIES.

COUNTIES.	Let- ters.	Circu- lars.	COUNTIES.	Let- ters.	Circu- lars.
			Total brought forward.....	191	105
Adams			Lawrence	1	
Allen	1		Licking	10	4
Ashland	6	2	Logan	8	4
Ashtabula	4	3	Lorain	6	4
Athens	6	3	Lucas	4	4
Auglaize	1		Madison vide Clark		
Belmont	11	5	Mahoning	5	4
Brown	5	3	Marion	5	4
Butler	1		Medina	4	4
Carroll	6	5	Meigs		
Champaign	5	3	Miami	5	4
Clark and Madison	8	4	Monroe	8	4
Clermont	8	3	Montgomery	4	5
Clinton	6	4	Morgan		
Columbiana	5	3	Morrow		
Coshocton	6	3	Muskingum	8	4
Crawford	8	3	Noble		
Cuyahoga	5	3	Ottawa	3	4
Darke	1		Paulding	1	
Defiance			Perry	4	4
Delaware	12	3	Pickaway	7	4
Erie	4	3	Pike	7	3
Fairfield	5	3	Portage	9	3
Fayette	6	3	Preble	4	4
Franklin	4	3	Putnam		
Fulton			Richland	9	4
Gallia	1		Ross	7	3
Geauga	6	3	Sandusky	1	
Greene	8	3	Scioto	3	4
Guernsey	4	3	Seneca	5	3
Hamilton	4	3	Shelby	5	5
Hancock	2		Stark	4	4
Hardin	5	3	Summit	4	4
Harrison	5	3	Trumbull	5	4
Henry			Tuscarawas	5	4
Highland	4	3	Union	5	4
Hocking	1		Vanwert		
Holmes	5	4	Vinton	2	
Huron and Erie	5	4	Warren	7	4
Jackson	4	4	Washington	3	4
Jefferson	6	4	Wayne	5	4
Knox	5	4	Williams	2	
Lake	2	2	Wood		
			Wyandot		
Total	191	105	Total	469	223

Numerous letters were written to individuals in and out of the State, about awards and various other matters connected with the operations of the Board.

ANALYSIS OF SOILS.

Soon after the meeting of the Board, in February, 1851, at which the counties were advised to take steps for having their soils analysed, the undersigned, as Agricultural Chemist, made preparations to carry out the intentions of the Board. The President of the Board petitioned the Legislature, and the action of the Legislature would, it is supposed, have been in accordance with the petition of the President of the Board, but for a mistaken view that was taken of the intention of the Board, in regard to the apparatus that had been put in possession of the Historical Society of Ohio by resolution of the Legislature. The undersigned was absent at the time to bring some of his chemicals to Columbus, (March 6th to 18th,) to supply some of the deficiencies that it would be necessary to supply in the chemicals of the geological survey.

Many letters were written to sundry persons, with a view to secure such assistance as would aid in the rapid, effective, and accurate analysis of the numerous soils that it was then supposed would soon be required to be made. In April, the soils of Pike county were mostly collected for analysis.

In May, Prof. D. A. Wells was engaged to make some analyses, as our laboratory had not been prepared, and the President, Mr. Sullivant, did not feel authorized to expend more money without the orders of the Board.

In June and July, the soils of Ross and a part of Pike counties were collected; also, a few in Pickaway and Franklin counties, and the soils of Ross and the remaining ones of Pike, were sent to be analyzed.

Some of the analyses have been made, and the methods are detailed in another place with sufficient minuteness for judges of such things to know what reliance may be placed on them.

They are inserted with a feeling of confidence that they will win the approval of those who examine them, and convey useful information to many who are seeking knowledge upon this subject.

The results have also been tabulated, so as to show a comparison of the different soils and the different modes of analysis. Several of these modes are an addition to the ordinary methods, and show the solubility of mineral and organic matter in various substances always found in the soil. Several of these modes are not generally found in analyses of soils heretofore made.

These modes of analysis that have been added to the ordinary ones, were contrived and adopted after having examined into, and tried all the other methods in use, and consulted various practical analysts on the subject, and taking into view the wants of plants, the substances existing in the soil, the natural solvents, both those gradually liberated in the soil by slow mineral decomposition, and absorbed by the soil from the rain, dew, moisture and gaseous matters in the atmosphere.

Messrs. Wells and Hays are entitled to much credit, in my view, for contriving these modes of analysis, which, though as yet but little practised, are believed to

have the approval of our best agricultural chemists, and will, I think, be generally adopted.

The analysis of a soil, to obtain accurate quantitative results of those minute quantities of some substances necessary for plants, and in particular for phosphoric acid, is a work of far greater difficulty than is usually imagined, and requires a skill in chemical manipulation, and that kind of knowledge, that few—very few, possess, and that requires a long time of study and practice to acquire. The time, also, for completing an analysis of soil, such as would enable the analyst to recommend confidently to the farmer the materials that were most wanted in the soil, is much longer than is usually supposed. The analysis of fifty soils may be considered a good year's work for an expert analyst, unaided by assistants or pupils. Many more than this might perhaps be accomplished in a well arranged laboratory, liberally supplied with room, materials and assistance.

The scheme now provided by the Board of Agriculture for obtaining a knowledge of the soils of Ohio, depending on the action of the county agricultural societies, although it is one that seems to promise good results, may, it is believed, be improved on, so as to acquire the same knowledge with less labor and time, and no increased expense; while the results may be looked on as more reliable by the farmer. As now arranged for, at least ten soils should be analyzed in each county, which would be more than 800 soils, or say sixteen years labor for a skilful analyst.

It is well known that there are belts of soil similar in character over many of the groups of counties in Ohio, overlying particular kinds of rocks, or formed from similar kinds of rock washed from a distance, and each is characterized by its peculiar growth of trees and plants.

These kinds of soil are often the prevailing soils over extensive tracts of Ohio, and a few of these from remote points would be as useful in determining the composition and characters, as adapted to certain kinds of culture or improvement, as if selected from every county.

It is therefore respectfully recommended, that an arrangement be made for the selection and analysis of the prominent soils of Ohio, with a view to understand the kinds of culture and improvement best adapted to them; also, to analyze soils in which there seems to be some natural defect, or a defect originating in a bad system of cropping; also, to trace more carefully the geological relations of soils; to analyze many of our rocks, particularly the limestone, slate, and finer sandstones, to ascertain whether some of these materials, or their combined fragments, would be useful additions to the soils of other parts, to supply missing or exhausted elements of fertility. The question of economy would be settled by every one interested in the use of such materials.

A work of this kind would seem to be more properly within the jurisdiction of the Legislature, which, by an appropriation could have the object contemplated by the Board of Agriculture carried into effect under the authority of the O. S. Board of Agriculture, whose limited means, with the numerous heavy drafts on those means,

seem to forbid their doing it, as they had contemplated in their resolutions of February last.

An agricultural survey of the State, authorized and provided for by the Legislature, to be executed under the authority of the Ohio State Board of Agriculture, would seem to be the mode by which the results contemplated by the Board may be best accomplished.

CAMBRIDGE, Aug., 1851.

TO PROF. MATHER,

Corresponding Secretary O. S. Board of Agriculture:

I herewith transmit the analysis of six soils from Pike county, Ohio, together with the notes and observations relating to them, which were made during their examination. I also inclose a full and complete account of the method of analysis pursued, with the results of an investigation as to the presence of organic acids combined with lime in stalactites obtained from various portions of the country.

I have the honor to be yours, respectfully,

DAVID A. WELLS.

TO PROF. W. W. MATHER, Columbus, Ohio.

METHOD OF ANALYSIS PURSUED IN THE EXAMINATION OF THE SOILS OF PIKE COUNTY.

In commencing the examination of the soils intrusted to me, from Pike county, it became a matter of no little importance to fix upon a method, which, while it should afford accurate and reliable results, should also be as rapid and convenient as might be consistent with accuracy. The method first considered was that laid down in the text book of "Quantitative Analysis," by Fresenius. This, after examination, was given up, and the plan recommended by Dr. C. T. Jackson, in his report on the "Geology of Rhode Island," examined, as well as a method kindly furnished me by Dr. Thomas Antisell, of New York, and which has been adopted by Prof. Mapes. Experience has convinced me that by none of these methods can we accomplish *all* that is to be desired in the analysis of a soil, and in this view I think I shall be sustained by this gentleman to whom I am indebted for the last two methods referred to.

After rejecting all these methods of analysis, I then, under the advice and direction of Dr. A. A. Hayes, of Boston, a gentleman whose chemical abilities are extensively known, adopted the following plan, which is believed to be superior to

any other, both for convenience and economy, as well as for the greatly increased value of the results obtained. This method is founded on views somewhat similar to those entertained and published by Mulder, and more recently by M. Soubeiran, in his memoir before the Agricultural Society of Rouen, France. It is also entirely opposed to the views entertained and taught by Prof. Liebig and the Giessen School of Chemists, respecting the office and condition of the organic constituents of soils. I would also state that I claim for Dr. Hayes the merit of originating and using this method in its essential features, independently of and before any results of a similar character had been brought forward by European chemists.

The method of analysis is as follows:

1. MECHANICAL DIVISION BY SEIVE.

For this purpose two sieves are generally needed, one made of copper wire, with meshes one-tenth of an inch square, and another of fine gauze, with meshes one-sixtieth of an inch in diameter. Having thoroughly dried the soil in the open air, crush to a sufficient extent to break down all lumps, without triturating the particles. The portion convenient for separation by the sieves will be found to be from 70 to 80 grammes, or about 1000 grains.

2. DETERMINATION OF THE MOISTURE, HYGROMETRIC AND COMBINED; ABSORPTIVE AND RETENTIVE POWERS.

The determination of these several points, and the method must be left in a great measure to the judgment of the analyst. By some chemists they are deemed highly important, and by others of little value. An exact way is as follows: The soil dried at 212° F., will give hygrometric moisture. The difference between drying at 212° F. and 250° F. will give what we may term combined moisture. With many analysts it is the custom to dry the soil finally at a heat at which paper turns brown, or from 300° F. to 350° F. It is believed, however, that a temperature greater than 250° , will occasion a loss of organic matter. In a soil rich in organic matter, or of a clayey nature, all the combined moisture cannot be expelled at 250° F. The excess, however, is trifling.

From 7 to 10 grammes of soil dried at 212° F. are saturated with water, and weighed upon a previously tared vessel, (i. e. a large weighed watch glass) The method followed was to saturate as much as convenient upon a filter, and transfer to the tared glasses. The difference between this weight and the weight of the soil dried at 212° F., will give the amount of water capable of being absorbed.

Expose the saturated soil 12 hours, to a temperature of about 70° F., and weigh.

Continue the exposure at the same temperature for 24 h., do for 48 h., or until the weight ceases to vary to any great extent. Note the loss of weight at each interval of time. Dry the residue at 212° F. and weigh. These determinations will give the retentive power of the soil for moisture.

The same amount of soil, dried at 212° F., may now be exposed to a moist atmosphere, at an average temperature of 70° F. for 12, 24, and 48 h., the gain in weight being noted. This gives the absorptive power of the soil. The method pursued was to place the soil under a receiver, by the side of a vessel of warm water, with a saturated sponge projecting a few inches above the margin of the vessel.

CHEMICAL ANALYSIS.

If the soil be fine, thirty grammes will be sufficient for analysis, or five hundred grains; if coarse, from forty to sixty grammes will be required.

Weigh out the portion for analysis upon a previously tared filter, or upon one the weight of whose ashes is known. Wash with about its own bulk of rectified 90 per cent. alcohol, concentrate the filtrate, evaporate to dryness upon a watch glass and weigh.

Follow with the same amount of pure washed ether, concentrate, and weigh as before.

These washings give the amount of waxy and resinous matters contained in the soil. The percentage may be calculated upon them either separately or jointly.*

ESTIMATION AND EXTRACTION OF THE CONSTITUENTS SOLUBLE IN PURE WATER.

Follow the washings upon the filter of alcohol and ether with pure water, and continue until the washings leave no appreciable residue when evaporated on platinum. Evaporate the solution to dryness, and weigh. Calculate the percentage upon the weight for the whole water extract.

After drying the evaporated extract thoroughly, digest for a short time in water, and decant the solution. Examine this solution qualitatively with the greatest care. The presence of Berzelius "Extract of Earth or Mould," or Dr. Dana's "Solution of Vegetable Extract," may be inferred from the discoloration of the water; alkaline chlorides, and other alkaline salts, will, if present in the soil, be found in this digestion of the water extract; also nitrates, and occasionally lime-salts; crenate of lime is with difficulty soluble after drying at 212° F. After digesting the whole water extract from the soil, with water, and decanting, dry the residue again at 212° F., weigh and note the loss. This in great part will be alkaline salts. Thoroughly ignite the residue and weigh. The loss will be organic matter, generally crenic acid. The residue of the water extract is then tested carefully for all other substances likely to occur there, i. e. iron, lime, magnesia, silica, sulphuric and phosphoric acids. Their total weight will be found by subtracting the weight last obtained from the original water extract. The percentage, or the absolute weight, one or both may be stated in the analysis at option. The percentage on the whole amount will of course be given.

*For reasons for separate washing with alcohol and ether, see observations and analysis of the soils of Pike county, Ohio.

EXTRACTION AND ESTIMATION OF THE CONSTITUENTS SOLUBLE IN DILUTE ACID.

The soil remaining upon the filter after the water washing, may now be washed with dilute acid upon the filter; or carefully dried, separated from the filter, and washed by decantation. The filter may be either reserved for the collection of the final residue, or ignited and the ashes added to the soil, and the weight subsequently deducted. The washing should be continued until a residue ceases to be left upon platinum.

Divide the acid washing into two equal parts, which distinguish as No. 1 and 2, respectively. Precipitate both portions with ammonia, in the smallest excess. Collect No. 1 upon a tared filter, and wash thoroughly with pure water. In the filtrate estimate the lime and magnesia, or sulphuric acid, if present, and the alkalies. Dry the tared filter and contents, at 250° F. and weigh. Transfer the contents of the filter to a crucible and heat to ignition, but not powerfully, apart from the air. The appearance of the mass after ignition, whether black or a bright red peroxide, will indicate the presence or absence of carbonaceous matters. Add the filter, ignite powerfully and weigh. The difference in the weight before and after ignition, minus the weight of the filter on the one hand, and the ashes on the other, will give approximately the amount of organic matter combined with the iron, alumina and manganese. The whole water not being expelled at 350° , creates a trifling error.

The contents of the crucible may now be mixed with one part pure silica, and six parts pure carbonate of soda; the whole thoroughly pulverized, mixed and fused strongly in a platinum crucible. The mass is then digested in water, the solution acidulated with nitric acid, evaporated to dryness and ignited to separate the silica. The mass is again digested with water, filtered and the filtrate tested for phosphoric acid, as pyrophosphate of magnesia. This is undoubtedly the best method of estimating phosphoric acid. Its results are not accurate, generally too small. There is, however, no better practical way. I consider the judgment of those accustomed to test for phosphoric acid with molybdate of ammonia as equally reliable.

TREATMENT OF NO. 2.

Precipitate with the smallest excess of ammonia; wash the precipitate thoroughly by decantation, and determine in the filtrate lime and magnesia, or sulphuric acid, and the alkalies. Boil the washed precipitate No. 2, with carbonate of soda, evaporate quite low and filter; test the filtrate, and if desired, estimate quantitatively, for oxalates. This is best accomplished by adding acetic acid to slight acid reaction, and driving off the carbonic acid present. If a precipitate forms on acidifying with acetic acid, render the liquor slightly alkaline with ammonia. Add chloride of calcium and acetate of potassa, and allow the solution to remain 12 hours. If a precipitate forms, it is either phosphate or oxalate of lime. To determine which of these two, or if both are present, ignite the precipitate gently apart from the filter. Oxalates will be converted into carbonates, and effervescence will ensue on

addition of acetic acid. Evaporate the precipitate so tested with acetic acid to dryness, and digest the residue with water. Acetate of lime dissolves, leaving phosphate of lime unchanged. The filtrate from the precipitated oxalates and phosphates, must be treated for silica and the amount found determined.

The precipitated iron, alumina, manganese, and the silica undissolved by the carbonate of soda, from portion No. 2, are dissolved in dilute acid, and the silica determined. Upon this amount and the quantity extracted from the filtrate from the oxalates and phosphates, the percentage is calculated. The iron, alumina and manganese, are reprecipitated after the separation of the silica, and determined in the usual way, jointly or separately.

The portion of the soil remaining, after the extraction of all matters soluble in water and dilute acid, is now to be treated for organic matter, crenic, apocrenic, and humic acids, and insoluble humine, in the following manner :

Saturate the soil with pure caustic ammonia and suffer it to remain three hours. Wash with water until the filtrate is nearly colorless, or a light yellow. Acidify the solution, collect the precipitated organic matter upon a tared filter, wash with acidulated water, dry at 250° , and weigh. Ignite the residue, in order to ascertain whether alumina is combined with the organic matter. If so, determine the quantity and deduct the percentage from the organic matter. The filtrate from the acid precipitate should also be tested for alumina with ammonia, and the quantity, if any, determined. This result, it is considered, gives the present worth of the organic matter in the soil, or the amount now ready to serve as food for the plant.

Saturate the soil remaining with caustic soda, (strength 1 part soda to 6 of water.) Allow the same to remain 12 hours and proceed as with the ammonia extract. The amount of organic matter obtained indicates, it is considered, the future worth of the soil in this respect.

The remaining soil is then thoroughly dried, at 250° , and weighed. Ignited powerfully and weighed again. The difference in weight gives the insoluble organic matter ; which it is believed exists in the soil in a state allied to charcoal, and which, under the influence of alkalies and other agencies, will ultimately be available for the nourishment and support of plants. Its present worth is also great, as a retainer of moisture, and of the more soluble portions of the soil.

What remains of the soil may be considered as insoluble silicates, and may be weighed and determined directly as such.

The insoluble silicates are then digested in water, the clayey and finer particles separated by agitation and decantation, and the amount of quartzose and silicious sand determined. For the constitution of the last, examine microscopically.

In the analysis of a soil by the above method, it is absolutely necessary that the alcohol, ether, water, and acid used, should be of the greatest purity. The water used should be prepared from milk of lime, to which a small quantity of nitrate of lead has been added, by distillation. The water thus prepared has a solvent action which is very remarkable.

In the products extracted by water, I have applied the term used by Berzelius to designate the soluble organic matter, "Extract of Earth or Mould." This, according to M. Soubeiran, is only humus, whose solution has been facilitated by calcareous or alkaline salts. It is, however, to be distinguished from crenic acid, which is generally found in the same solution; crenic acid dries up into thin plates, somewhat resembling boracic acid, with a fine lustre and a nauseous smell.

The acid used in washing may be either hydrochloric, nitric, or acetic, though the first on some accounts is preferable. In strength they should not much exceed that of strong vinegar, or of such a degree only as to act sharply on the tongue. Acids of a greater strength, it is considered, would not fairly represent the solvents acting naturally upon the constituents of a soil.

In presenting this method of analysis, I would not be understood as implying that it is free from objections, or that in the examination of soils for mere economical purposes, it is always to be followed. But for complete and thorough soil analysis, I consider it superior to any other, especially as regards the determination and extraction of that important part of every fertile soil, viz: the organic matter in its several conditions. For mere economical purposes, the quantitative determination of iron, (unless present in unusually large or injurious quantities,) alumina, manganese, and magnesia, *is of no value*. There are some other points which might also be omitted, or examined with less accuracy. Particular soils in all cases require particular treatment, corresponding with their nature or the purpose for which they are examined.

There is one point in this connection, which it may not be improper to advert to, as it is one of vital interest to the progress of scientific agriculture. This is the tariff of prices paid by agriculturists to chemists, for the examination and analysis of soils. It may be stated in plain language, that it is impossible for any chemist to analyse a soil with a view of furnishing a correct opinion of its merits, for the sum usually paid,—five dollars or less; and it is not improbable that much of the discredit which has attached itself to soil analysis and scientific agriculture, has had its origin in work executed, and *perhaps more than paid for*, at prices corresponding to those above mentioned. To show the extent to which cheap soil analyses have been introduced, I would state that within a comparatively recent period, a person in one of the northern States, pretending to be a scientific agriculturist, and editing an agricultural journal, has offered and advertised to make complete and thorough soil analyses for two dollars. Such a proposal should at once stamp the author as a charlatan and a quack, and when our agriculturists rightly understand this matter, a complete soil analysis, made for pecuniary purposes for two dollars, or even five, would no more be purchased than a plow would be for fifty cents, or a yard of superfine broadcloth at the same price, at a fair sale.

SOIL—No. 1.

DESCRIPTION.—Hill soil, of the rolling upland, on the east of the Scioto valley, of Big Run valley, and supposed to be like that of Beaver valley. Good grass, oat, and tolerable wheat and corn land. Wheat, however, freezes out badly. This soil was taken from the farm of Cornelius W. Bailey, in his orchard, at the south-east corner of the brick house now erecting (1851). It is not known how long the land has been cleared and cultivated; but the orchard has been planted with fruit trees at least forty years.

This soil is like that of the surrounding hill and rolling country; of a reddish-yellow and buff color, when dry, after plowing. The specimen was taken from Field township, Pike county, six miles S. S. E. of Piketon. The rock underlying the soil of the hill is the Waverly sandstone.

MECHANICAL ANALYSIS.—Soil entirely free from stones or pebbles. When the dried lumps were carefully crushed, the greater part of the sample examined was almost an impalpable powder. Seven parts, consisting of vegetable fibre and coarse sand, out of one hundred, remained upon a seive, the meshes of which did not exceed one sixtieth of an inch in diameter.

ABSORPTIVE AND RETENTIVE CHARACTER FOR MOISTURE.—11.6210 grammes soil, dried at 212° F., absorbed up to point of saturation 3.2810 grammes water; or 100 parts saturated soil contain 22 parts water, and 78 parts earthy matter.

Whole weight soil and water = 14.9020; exposed to dry atmosphere 12 h. then 60 to 70° F., 14.9020 grammes lost 0.2350 = 1.59 p. c. Continued exposure 60 h., temperature the same, 14.9020 grammes saturated soil lost 3.1560 grammes, = 21.1 p. c. Dried at 212° F., until weight ceased to vary, whole loss = 22.01.

RECAPITULATION.—Moisture lost between the point of saturation and 70° F., 21.1; between 70° and 212° F., = 0.91. Total, 22.01.

The above quantity, dried at 212° F., and weighing 11.6210 grammes, was then exposed to a moist atmosphere and absorbed in 48 hours, Ther. 60° to 70° F., 0.3240 grammes.

Chemical Analysis.

Water—Hygroscopic	= 1.23 p. c.
“ Combined	0.53 “
Total	“ 1.7600
Resinous and waxy matters extracted by alcohol	= 00.0074
Constituents soluble in pure water:	
“Berzelius Extract of Earth,” alkaline chloide, with traces	
of lime	= .0349
Organic matter, crenic acid	= .0086
Iron lime and silica	= .0150
Total water extract .....	.0585
Per centage on the whole amount	= 00.217

Constituents soluble in dilute acid :

Peroxide of iron, alumina with traces of manganese	= 04.2540
Organic matter combined with the above bases	= 00.4440
Lime	= 00.1000
Silica, soluble	= 00.3340
Phosphoric acid	= 00.0336
Traces of magnesia, (not determined)	= 00.0000
“ alkalies, “ “	= 00.0000
<hr/>	
Total per centage of extract with acid	= 5.1656
Organic matter rendered soluble by ammonia, found in connection with alumina, and indicating the presence of apocrenic acid.....	
Organic matter rendered soluble by soda	= 02.0000
Organic matter rendered soluble by soda	= 00.1450
Organic matter remaining in combination with the insoluble silicates, and determined by ignition.....	= 00.4700
Whole amount of organic matter determined, as found in the water extract, combined with iron and alumina, and extracted by alkalies..	= 03.0750
Insoluble silicates and clay.....	= 88.1849
<hr/>	
Total	97.9499
Magnesia, alkalies in acid extract, determined, and loss	= 02.0501
<hr/>	
100.0000	

One hundred parts of the insoluble residue consisted of 37 parts silicious sand, apparently detritus from syenitic rocks, with small particles of feldspar and yellow jasper. No mica was noticed. The residue consisted of fine clayey matter = 63 parts.

The organic matter contained in this soil was also determined, in a separate portion, in the ordinary way, by ignition.

The whole amount so found	2.8700
Difference	0.2000

 SOIL — No. 2.

DESCRIPTION.—From the best bottom land opposite the mouth of Sunfish Creek, about 100 yards east of the Scioto river. This is occasionally overflowed, and has been cleared and cultivated about eighteen years, successively, in corn, and yields with ordinary culture from seventy to eighty bushels of corn to the acre. The average crop has not sensibly diminished since it was first cleared. The timber growth originally on this ground, when cleared, was honey locust, black walnut, pawpaw, box elder, white ash, elm, mulberry and buckeye.

MECHANICAL ANALYSIS.—Color, when dry, a dark brown, of an extraordinary degree of fineness. Of 100 parts, only 1.6 parts, consisting in large part of vegetable and organic matter, refused to pass through a seive, the meshes of which did not exceed one-sixtieth of an inch in diameter. Entirely free from stones and pebbles.

ABSORPTIVE AND RETENTIVE POWER FOR MOISTURE.—7.4170 grammes dried at 212° F., absorbed, up to point of saturation, 4.5230 grammes water; making whole weight, soil and water, = 11.9400 grammes, = 37.88 per cent.

The above quantity of saturated soil exposed 24 hours, thermometer 60°, to a dry atmosphere, lost 2.3545 grammes moisture. Continued exposure, under the same circumstances, until weight ceased to vary, whole loss = 4.2485. Thoroughly dried at 212° F., additional loss = 0.2745 = 2.29; whole loss, = 4.5230—37.88 per cent. Absorptive power over hygrometric moisture, at 60°, 35.59—37.88—2.29.

Chemical Analysis.

Water, hygrometric and combined = 03.636

Waxy and resinous matters extracted by alcohol = .0030

Do. by ether0025

Total extract0055

Per centage on the whole amount = 00.0164

Constituents soluble in pure water :

“Berzelius Extract of Earth” and alkaline chlorides = .0460

Organic matter, crenic acid = .0208

Silica, iron, lime, with traces of sulphuric acid = .0652

Total water extract1320

Per centage on the whole amount = 00.395

Constituents soluble in dilute acid :

Peroxide of iron, alumina, and manganese = 01.995

Organic matter, combined with iron, alumina, &c. = 01.004

Silica, soluble = 0.640

Phosphoric acid = 0.041

Potassa and soda = 0.161

Lime = 1.026

Magnesia 0.236

Total per centage of constituents soluble in acid 5.103

Organic matter rendered soluble by ammonia, accompanied with alumina, and indicating the presence of apocrenic acid = 01.840

Do. do. rendered soluble by soda = 04.368

Organic matter remaining in combination with the insoluble residue, and determined by ignition = 04.145

Whole amount of organic matter determined from the soil, as extracted
by water, acid, and alkalis, and determined by ignition from the
final residue = 11.373
Whole amount as determined by ignition --- = 10.970

Difference = 00.403
Insoluble silicates and earthy residue..... = 78.842

One hundred parts of the insoluble residue gave by washing and separation, 45
parts silicious sand, and 55 parts clayey particles.

Whole amount of all constituents determined = 98.3454

SOIL—No. 3.

DESCRIPTION.—Sandy loam soil, forming spots in the Pee Pee bottom, on James Sargent's farm; occurs on the edges of slight elevations on the bottoms where the plow brings up the sandy soil. These spots are the poorest and least productive on the bottom. This soil is rarely exposed to the plow on spots more than a few square rods in extent. The bottom was prairie at the first settlement of the country.

MECHANICAL ANALYSIS.—Color of the sample examined, yellow, or buff. A coarser variety of soil than any of the other specimens examined from the Scioto valley. From its location and appearance it is evidently a sub-soil.

ABSORPTIVE AND RETENTIVE CHARACTER FOR MOISTURE.—13.57 grammes soil absorbed, up to point of saturation, 3.60 grammes moisture.

The above quantity of saturated soil = 17.17 grammes, was then exposed to the open air, and the following changes in weight and temperature of the atmosphere noticed:

In 2 hours, dry atmosphere, thermometer 85° F., weight = 14.51, lost = 2.66 grammes. The residue exposed 5 hours, thermometer 77° F., weight = 13.65; whole loss = 3.52 gram's; exposed 48 hours, moist atmosphere, ther. 66° F., soil gained over last weight = 0.02. Continued exposure in dry atmosphere, ther. 72°, weight = 13.65, loss = 3.52 grammes. Thoroughly dried at 212° F., weight = 13.57, loss = 3.60 gram's; 10,433 grammes, dried at 212° F., and exposed to a moist atmosphere 86 hours, absorbed = 0.242 gram's; whole weight = 10.675 grammes.

Chemical Analysis.

Water, hygroscopic and combined..... = 00.44

Constituents soluble in pure water :

Chloride of potassium.....	= .0070	
Organic matter.....	= .0055	
Silica and lime traces.....	.0000	
Total water extract.....	.0125	
Total per centage.....		= 00.057

Constituents soluble in dilute acid :

Iron, alumina, and traces of manganese.....	= 02.000	
Organic matter combined with the above.....	= 00.440	
Silica, soluble.....	= 00.20	
Lime.....	02.55	
Manganese.....	01.28	
Phosphoric acid and alkalies, traces.....	00.00	
Total per centage of extract with acid.....		= 06.470
Carbonic acid.....	02.30	
Organic matter rendered soluble by ammonia.....	= 00.42	
Organic matter rendered soluble by soda.....	= 00.05	
Organic matter remaining with the insoluble silicates, and determined by ignition.....	= 00.50	
Insoluble silicates.....	= 90.27	
Total.....		= 100.507

SOIL—No. 4.

DESCRIPTION.—A clayey loam, from James R. Hibbin's farm, ten rods southeast of the farm gate, on the Portsmouth turnpike, which is about one mile and twenty rods from Waverly, towards Piketon. This land has been cultivated 42 years in corn, and has been only two or three years in grass, in 45 years. It is in Pee Pee township, on the Pee Pee Bottom, in Pike county. This soil is like a portion of the Scioto bottoms, approaching to clay; yields well, but not so heavily as the darker soil of lighter loam.

MECHANICAL ANALYSIS.—Color, when dry, a light brown, sifted upon meshes not exceeding one-sixtieth of an inch in diameter, one hundred parts gave 93.63 fine loam, and 6.37 coarse sand and fibres.

WATER DETERMINATION.—3.409 grammes, dried at 212° F., lost 02.05 per cent. 3.409 grammes, dried at 250° F., lost 02.57; difference, 0.52 per cent. 3.409 per cent. 3.409 grammes, dried at 70° F., lost 00.30 per cent. 3.409 grammes, dried at 2.50° F., lost 02.57 per cent.; difference, = 2.27 per cent. 9.613 gram's soil dried at 212°, absorbed up to point of saturation 4.014 grammes moisture.

Chemical Analysis.

Water, hygroscopic and combined.....	= 02.570
Resinous and waxy matters extracted by alcohol.....	= 00.013
Resinous and waxy matters extracted by ether.....	= 00.008

Total per centage..... = 0.021

Constituents soluble in pure water :

Extract of earth and alkaline chlorides.....	= 0.0305 wt.
Organic matter, crenic acid not noticed.....	= 0.0105 "
Lime, silica, iron and traces of sulphuric acid.....	= 0.0120 "

Total water extract..... = 0.0530 "

Per centage on the whole amount..... = 00.170

Constituents soluble in dilute acid :

Iron, alumina, and traces of Manganese.....	= 01.240
Organic matter, combined with iron, alumina, &c.....	= 00.25
Silica, soluble.....	= 00.27
Lime.....	= 00.40
Magnesia.....	= 00.017
Phosphoric acid and alkalies, traces.....	= 00.000

Whole per centage of constituents soluble in acid..... = 02.277

Organic matter, rendered soluble by ammonia.....	= 02.320
Organic matter, rendered soluble by soda.....	= 01.620
Organic matter remaining with the insoluble residue, and determined by ignition.....	= 01.44
Insoluble silicates.....	= 88.43

Total..... = 98.848

The loss in this analysis is undoubtedly to be referred to organic matter, which, upon protracted washing, becomes soluble and escapes.

Soil — No. 5.

DESCRIPTION.—Rich, black, sandy loam, of the Pee Pee Bottom, in Pee Pee township, on James Sargent's farm, about one half mile east from the Portsmouth and Chillicothe turnpike, about one and a half miles a little east of north from Piketon. This land has been cultivated fifty years; forty-five crops of corn, and two or three of wheat, have been taken off it, and it has also been two or three years in clover. It has scarcely diminished in fertility, and now, with ordinary culture, yields on an average, one year with another, eighty bushels of corn to the acre. It is occasion-

ally overflowed by the high floods of the Scioto. It was originally a prairie, without timber, except a few scattering trees.

MECHANICAL ANALYSIS.—Color of the soil when dry, a light brown, but black when moistened. In fineness it exceeds any of the other samples examined, and in this respect must be considered as one of the most remarkable soils ever analyzed.

Out of 100 parts, 1.05 only refused to pass through a sieve, the meshes of which did not exceed one sixtieth of an inch in diameter. A large proportion of the coarse residue consisted of undecomposed vegetable fibre.

ABSORPTIVE AND RETENTIVE CHARACTER FOR MOISTURE.—7.5445 grammes soil, absorbed up to point of saturation=4.9200 grm's water.

Exposed to a dry atmosphere until weight ceased to vary: Ther. 70° F., lost = 4.7050; dried at 212° F., additional loss = 0.2150; whole loss = 4.9200. 7.5445 grammes exposed to a damp atmosphere for 48 hours, weighed 7.9255; gain = 0.3810.

Chemical Analysis.

Water, Hygroscopic and combined.....	=	03.50
Resinous and waxy matters extracted by alcohol.....	=	00.032
“ “ “ ether.....	=	00.004
Whole per centage, waxy and resinous matters.....	—	= 0.036

Constituents soluble in pure water :

Extract of earth, alkaline chlorides, with traces of lime....	=	.032
Organic matter, crenic acid:.....	=	.010
Lime, iron, silica, with traces of sulphuric acid.....	=	.012

Total weight of water extract.....	=	.054
Per centage on the whole amount.....		00.190

Constituents soluble in dilute acid:

Iron, alumina and manganese.....	=	02.760
Organic matter combined with iron, alumina, &c.....	=	00.860
Silica, soluble.....	=	00.560
Lime.....	=	00.390
Magnesia.....	=	00.280
*Phosphoric acid.....		00.041
*Alkalies.....		00.161

Per centage of the whole amount soluble in acid.....		05.052
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*In the determination of phosphoric acid and the alkalies in this soil, full confidence was not placed in the results obtained, and time not being given for verification, it was thought best to substitute for them, the per cents obtained in soil No. 2; no doubt being entertained that the quantities of phosphoric acid and alkalies existing in No. 5, were at least as great as in No. 2, and in respect to the amount of phosphoric acid, it was probably much greater in No. 5, than in No. 2.

Organic matter rendered soluble by ammonia, and found in connection with alumina, indicating the presence of apocrenic acid.....	= 03.140
Organic matter rendered soluble by soda	= 01.030
Organic matter remaining in combination with the insoluble residue, and determined by ignition.....	= 01.720
Insoluble silicates.....	= 83.010
Total	97.678
Loss, principally due to the solubility of the organic matter extracted by alkalies.....	= 02.322

One hundred parts of the insoluble residue consisted of 59 parts silicious sand, apparently detritus from syenitic rocks, and 41 parts clayey matter.

SOIL—No. 6.

DESCRIPTION.—Soil, brownish black when dry. From the Pee Pee Bottom, near the line between James Sargent's and John Prather's farms; on the farm of the latter, eighty rods from the Scioto river, in a sugar tree grove. This land has never been inundated since the first settlement of the country; has never been cultivated, but is set in grass, which has never been mowed. It has been pastured occasionally, and seems similar in character to soil No. 5, except that it is more sandy. The natural timber growth on this land, was sugar tree, elm, black walnut, black ash, honey-locust, and hickory. The timber has been cut off, except the sugar trees.

MECHANICAL ANALYSIS.—One hundred parts dry soil, the lumps having been carefully crushed, were sifted upon meshes, the diameter of which did not exceed one sixtieth of an inch. 92 parts, consisting of fine loam, passed through; 8 do. vegetable fibre and silicious sand, remained.

ABSORPTIVE AND RETENTIVE POWER FOR MOISTURE.—5.6060 grammes dried at 212° F., absorbed up to point of saturation, 2.1140 grammes water = 37.7 p. c.

The above quantity saturated soil exposed to a dry atmosphere 24 hours, Ther. 72° F., lost 2.0485 grammes = 36.54 p. c. The residue thoroughly dried at 212° F., lost 0.0655 = 1.15 p. c. Exposed to a moist atmosphere 24 hours, 5.6060 grm's soil, dried at 212° F., absorbed 1.6265 grm's moisture = 27.2 p. c.

Chemical Analysis.

Water, hygroscopic and combined	= 01.56
Resinous and waxy matters extracted by alcohol.....	= 00.0024
" " " ether	= 00.0009
Total extract.....	= 00.0036

Constituents soluble in pure water :

Extract of earth, alkaline chlorides, with traces of lime....	= .0237
Organic matter, crenic acid.....	= .0050
Iron, lime and silica.....	= .0055
Total extract	= .0342
Total per centage.....	= 00.111

Constituents soluble in dilute acid :

Iron, alumina and manganese.....	= 01.629
Organic matter combined with these bases	= 00.550
Silica, soluble.....	= 00.628
Phosphoric acid, traces.....	=
Lime.....	= 00.281
Magnesia	= 00.102
Alkalies, not determined.....	=

Per centage on the whole amount of each extract..... = 03.190

Organic matter rendered soluble by ammonia.....	= 02.530
" " " soda	= 00.610
Organic matter remaining with the insoluble silicates, and determined by ignition.....	= 01.600
Insoluble silicates.....	= 88.520
Total.....	98.159

One hundred parts of the insoluble residue consisted of seventy parts silicious sand, with a few particles of feldspar and yellow-jasper ; the remaining thirty parts consisted of fine clayey and loamy particles.

It may here be stated that the examination of the final residue of all these soils was made microscopically, the particles being too fine to admit of much distinction by the naked eye.

In all the analyses a slight loss must have been experienced from not estimating the combined water at a temperature above 250°, and also from the solubility of organic matter consequent to the protracted washing.

OBSERVATIONS ON THE ANALYSES OF THE SOILS OF PIKE COUNTY.

In presenting these six analyses of the soils of the Scioto Valley, I would take this opportunity to call attention to the several points of interest, noted during their examination, which I consider worthy of especial attention. The reputation of these soils for fertility, is extensively known, as well as their general character and chemical composition; but I am not aware that any extended and thorough examination of a suite of specimens from known localities, has heretofore been made by any Chemist. If, therefore, my observations and notes may seem too minute and particular, I trust I shall find a sufficient excuse in the circumstance above stated.

The first, and perhaps the most interesting fact noted in the examination of these soils, is the remarkable degree of fineness of their constituent particles. In this respect, I venture to assert, that they are not surpassed by any other alluvial deposits on the surface of the earth; some of the soils being little less than an impalpable powder. In commencing their examination, it was at once seen, that a mechanical division of the soils, by means of the sieves ordinarily used in soil analyses, would not afford a fair indication of the minuteness of their particles; I therefore procured a sieve of the finest gauze, the largest meshes of which, by accurate measurement, did not exceed one-sixtieth of an inch in diameter. The soil was then broken up in a porcelain mortar, care being taken that the dried particles only were crushed, without triturating any of the silicates or earthy matter. One hundred parts of each of the six samples so treated, were sifted with the described sieve, and left upon the meshes the following small quantities of residue; of this residue, it should be stated, that not a small portion was made up of vegetable fibres, and undecomposed organic matter: Of sample No. 1, seven parts in one hundred, remained upon the sieve; of No. 2, one and six-tenths; of No. 3, (a sub-soil,) from twenty to thirty parts; of No. 4, six and three-tenths; of No. 5, one and five-tenths; of No. 6, eight parts.

The remarkable comminution of the particles of these soils, gives us at once a clue to their great fertility. With this fineness, an increased power is at once given to a soil for the absorption, retention and condensation of moisture, ammonia and carbonic acid; and opportunity for the free permeation of atmospheric air, and a facility to the rootlets of plants for extension, and a consequent increased facility for receiving and appropriating nourishment. Indeed, a soil not scantily provided with the inorganic constituents deemed necessary for the support of vegetable life, but gifted with this fineness of the elementary particles, must have important elements of fertility. Indeed, I consider the existence of a large proportion of finely divided matter in a soil, of fully as much consequence, as regards its fertility, as its chemical composition is. It must be also evident, that a soil composed in great part of silicious matter, (as many of the fertile western soils are,) may, if the particles possess sufficient fineness, assume to a considerable extent, the good properties and characteristics of an aluminous soil, without its bad ones. As an illustration of this

I would state that one of the best tobacco soils upon the Island of Cuba, sometime since examined by Dr. A. A. Hayes of Boston, was found to contain ninety per cent. of the peroxide of iron. And yet this soil, which we might suppose would be barren, without the usual proportions of silicious and aluminous matter, is, on account of its great fineness, and the remaining ten per cent. of organic and inorganic constituents, enabled to produce the best crops upon the Island.

These advantages of fineness it is evident the Ohio soils will always possess, as it cannot be exhausted by any system of agriculture. To this point I wish to call special attention, since if due regard be paid to the supplying of these soils with the necessary quantities of organic and inorganic nutriment, they must, and always will be unrivalled for fertility.

An examination of the silicious insoluble constituents of these soils, leads to the belief that they have not been derived from the distegration or decay of any underlying or contiguous rocks, but from materials brought from a distance. Many of the rocks of Ohio are for the most part carbonate of lime, and yet in only one of the soils examined, viz., in subsoils No. 3, was the slightest trace of carbonic acid detected. The method adopted for testing, was by placing the soil in a favorable light upon a watch glass, covering with dilute warm acid, and noticing carefully for the appearance of effervescence. In this way the most minute quantity of carbonic acid could not fail of being recognized. In the examination of the soils of Massachusetts, by President Hitchcock, the same remarkable deficiency of carbonates, was noticed. The same conclusions have, I understand, been arrived at by Dr. Owen, from an examination of the soils of Iowa and Wisconsin. From these facts we believe, that alkaline and earthy carbonates, are to a much greater extent wanting in arable soils, than is generally supposed. The supposition should perhaps be confined to the northern portions of our country, which have soils resulting mainly from materials distributed by the drift agency.

Where a soil containing considerable quantities of organic matter is tested for carbonates after ignition, they will generally be found; the crenates and apocrenates passing over into carbonates and remaining fixed, except at a high temperature. A microscopic examination of the silicious insoluble residue of these soils, left after the extraction of all soluble organic and inorganic substances, showed them to be composed of the detritus of syenitic and porphyritic rocks, consisting of minute particles of quartz, feldspar and yellow jasper, without the presence of mica.

The quantity of organic matter in these soils, is generally large, varying in the samples examined, from two to ten and eleven per cent. It should be stated, that the estimation of this organic matter was made upon the finest portion of the soil after sifting, and in this, there is not included the smallest portion of indecomposed vegetable fibre, which is not unfrequently estimated in the organic percentage of other analyses. The amount of nitrogenous compounds contained in this organic matter, is undoubtedly large, although not determined. The peculiar odor of these compounds while burning, was noticed very appreciably in the ignition of sample No. 2, and in others.

Particular attention was given to the accurate determination of the amount of waxy and resinous matters contained in these soils, and although it may not be possible to say, that they enter unaltered and directly into vegetable systems, yet we know that as constituents of vegetables, they re-enter to form fats in the systems of animals. I can, therefore, but consider a soil analysis, into which their careful determination is not included, as essentially deficient.

In the statement of the analyses, the products extracted by alcohol and ether, are given separately. At present I am not prepared to say, that bodies of a different constitution are extracted by these different solvents; there are, however, reasons, which induce me to believe this is really the case, and, also, that the products so extracted, are not mere resins and gums, as is generally supposed, but vegetable fat acids. This important point, which a want of time has compelled me in a great measure to overlook, will form the subject of future investigations. I would also say, that this matter has engaged the attention of Dr. A. A. Hayes, who fully coincides with the opinion expressed.

Among the constituents of these soils soluble in water, were found soluble organic matter, (to which Berzelius has applied the term "extract of earth, or mould," and Dr. Dana, of Lowell, "solution of vegetable extract,) alkaline chlorides, lime, magnesia, iron, silica, and organic matter combined with these bases. The presence of the first three of these bodies, was to be expected, but the solution of the last three in water, in the absence of a mineral acid, and that, too, in considerable quantities, is, it seems to me, especially worthy of notice. An explanation must be sought for in the presence of organic matter, crenic, or apocrenic acid. In the latter published works of Mulden, a salt of the constitution $C\ 48, H\ 12, O\ 24$, (apocrenic acid,) $+ NH^4 O + KO + CaO + MgO + FeO$, is given as soluble in water. It is not improbable that the extractive matter noticed, may have possessed this constitution. In all the soils examined, appreciable quantities of phosphoric acid and alkalies existed, and in all the amounts were quantitatively determined, but in those soils only, in which the determinations received entire confidence, were the results stated in the analyses.

In these analyses for the first time has the amount of organic matter combined with the iron and alumina, been carefully estimated by itself. This organic matter is undoubtedly combined with the above mentioned bases, as an acid, and as such, many have an important bearing upon the fertility of a soil. In some of the New England soils, this acid has been ascertained by Dr. Hayes, to be oxalic acid, and the soil, as might be expected, was well adapted to the growth of sorrels and acid plants. I have tested the soils of Pike county, carefully, for the presence of oxalates, but have not been able to detect it. What other acid may be present, I am unable to say; the subject in this connection is new, and requires considerable investigation. It has heretofore been generally omitted in the analyses of soils.

Manganese was present in all the specimens examined. Its quantitative determination, unless present in large quantities, as well as the separate determination of

the amount of iron, and the amount of alumina soluble in acid, I consider of little or no value in a soil analysis.

The method by which the organic constituents of these soils have been extracted, and their comparative value determined, cannot, I think, fail to recommend itself. In ordinary soil analyses, the amount of organic matter in its several conditions, viz.: in that in which it is ready to be used as food for plants, in a stage less advanced, and in a condition resembling charcoal, is determined as a whole and without distinction; thus giving the agriculturist no opportunity of judging whether this portion of his soil is in a condition resembling a peat-bog, or in a state conducive of fertility.

There is one other subject connected with the analyses of these soils, which I consider of the highest possible importance, and to which I would direct especial attention. Dr. Dana, of Lowell, in course of many year's experience, has collected and preserved the results of more than four hundred analyses of soils, from the northern portion of this country. The analyses of the soils I have made from Ohio, and the analyses of all the soils resulting from drift agency, collected by Dr. Dana, do not differ materially, so far as regards their inorganic constituents. That is to say, the soils of Ohio, yielding from seventy to eighty bushels of corn to the acre, are no better, so far as regards their chemical composition, than the average of the soils of Massachusetts are, which are famed for sterility. In what then is a reason for their difference to be found? It cannot be in the attributes, in which they agree, which are there their mineral constituents, but in those in which they differ, and these are the amount and condition of the organic matter contained in them, and the fineness of their constituent particles.

In concluding these notes I would say, that while I consider the method of analyses followed in these determinations to be superior to any other, both for the convenience of manipulating and the increased value of the results, the analyses themselves have many deficiencies. This, from lack of experience in regard to these soils, and from the different course adopted in their examination, could not have been otherwise. Many of the points referred to are entirely new, and demand a careful and thorough examination. This I hope to be able to effect and lay before you at a future opportunity.

I wish here to acknowledge my indebtedness to Dr. A. A. Hayes of Boston, for his advice and co-operation, and am happy to say that he fully sustains the opinions and results here brought forward. I am also under obligations to Mr. Joseph Ela, of the Lawrence Scientific school, at Cambridge, for assistance rendered in the verifying of results, and otherwise.

ON THE EXISTENCE OF ORGANIC MATTER IN STALACTITES AND STALAGMITES AS CRYSTALIZED AND AMORPHOUS CRENATE OF LIME.

BY DAVID A. WELLS, CAMBRIDGE, MASS.

In the eighth chapter of Liebig's *Agricultural Chemistry*, edited by Playfair, we have given the result of some examinations of stalactites from caverns, in Germany, and from the vaults of castles upon the Rhine, made with the view of ascertaining the fact of the presence or absence of organic matter in these bodies, either combined or uncombined.

The result may be stated in the words of the author, Prof. Liebig. The stalactites from the caverns "contain no trace of vegetable matter, and no humic acid, and may be heated to redness without becoming black." In the stalactites from the vaults and cellars of old castles, he says, "we could not detect the smallest trace of humic acid." There could scarcely be found a more clear and convincing proof of the absence of the humic acid of chemists in common vegetable mould. Under the term, humic acid, Prof. Liebig undoubtedly means to include all those organic acids arising from the decomposition of vegetable matter, and which have received the name of crenic, apocrenic, geic and humic acids.

Having been informed by Dr. A. A. Hayes, of Boston, that he had, in numerous examinations, arrived at a result directly opposite to that of Liebig's, I was induced, at his suggestion, to make an examination of a large number of stalactites and stalagmites obtained from various localities, in reference solely to the presence or absence of organic matter in these bodies.

The specimens examined, were all from caverns or rock formations, and were obtained from various parts of the United States, from Trieste, Austria, Malta and the Sandwich Islands. In color, they varied from an almost pure white, to red, yellow and brown of different shades; and in crystalline character, from a structure resembling arragonite, to those entirely wanting in symmetrical arrangement, or mere incrustations. The specimens were dissolved in dilute hydrochloric acid, the flocculent matter separated, collected and washed, boiled in caustic potassa, carbonate of ammonia, or carbonate of soda, and then tested in the usual way for crenic and apocrenic acids, by acetate of copper, and carbonate of ammonia. In all the varieties, with one exception, abundant flocculent organic matter was separated, which, on testing, gave evidence of crenic acid in considerable quantities, with doubtful traces of apocrenic acid. The exception alluded to, was the specimen examined from Trieste, which did not give any appreciable flocculent matter, on dissolving in acid. The greatest quantity of this organic matter was found in stalactites of a deep yellow color, highly crystallised and uniform in character; a

in the portions examined, perfectly homogeneous and free from any layers or intervening bands, indicating different periods and changes in deposition.

As the presence of iron could not be found in the acid solution, it is inferred that the color of these yellow stalactites is wholly owing to combined organic matter, existing as crenate of lime. In specimens, like those spar ornaments from the rock of Gibraltar, with which all are familiar, the coloring and delicate shading is believed to also depend on organic matter.

Dr. Hayes informs me that he has also found organic matter in Arragonite, in sufficient quantities to separate in flakes, while the specimen was dissolving in acid.

From these statements, it must I think be inferred, contrary to the view of Liebeg, that organic matter does exist in stalactites generally, as an acid combined with the lime, and imparting to them their various colors.

I would by no means call in question the accuracy of the experiments of Prof. Liebeg, further than that as far as my observations extend, crenic acid in the presence of lime and combined with it, passes over, like oxalates, into carbonates, upon heating, without preceptable blackning.

It may here be added, that Prof. Johnson of England, describes a compound of alumina with crenic acid, occurring in caves of granite, upon the coast of Cornwall. This mineral has received the name of pigolite, and is observed in places where the surface water trickles down over the granitic rocks.

From this, it may not be improper to apply the term crenate, to those lime formations in which crenic acid occurs in considerable quantities.

Since the preparation of this paper, I have been informed by Dr. J. Lawrence Smith, that he has frequently met with crenic acid in lime concretions from Asia Minor:

ANALYSIS OF THE SOILS OF PIKE COUNTY, OHIO.

	No. 1.	No. 2.	No. 3.	No. 4.	No. 5.	No. 6.
	Rolling upland yellow clay loam soil in orchard, cleared at least 40 years, 6 miles S. E. of Pike-ton, Rock below, Waverly sandstone.	Best Scioto bot-tom land, near mouth of Sun-fish creek, cul-tivated 18 years successively in corn, and yields about 70 to 80 bushels per acre. Allu-vial.	Sdy loam sub-soil, that emer-ges in small spots on the Pee Fee Bottom, about 14 miles from Pike-ton, 42 years in corn, 3 in grass. Alluvial.	Best Scioto bot-tom land, dark clay loam, 1 m. from Waverly, towards Pike-ton, 42 years in corn, 3 in grass. Alluvial.	Best bottom land, J. Sar-gent's, 1 1/4 miles from Pike-ton, 2 years in corn, 2 in wheat, and 3 in grass. Never in grass. Yields 80 bushels corn since the whites with ordinary culture. Allu-vial.	Black sandy loam best bot-tom soil near Pike-ton, 46 No. 5; never cul-tivated now in grass. Never been overflowed since the whites occupied the country. Allu-vial.
By the sieve { Fine earth Vegetable fibre..... Sand	93.	98.4		93.63	98.95	92.
	7.	1.6		6.37	1.05	8.
	100.	100.		100.	100.	100.
	Total weight examined					
MECHANICAL ANALYSIS.						
ABSORPTIVE AND RETENTIVE POWER FOR MOISTURE.						
By exposure to moist air, to saturation, and drying at 60 to 80 deg., & then 212 deg.	0.91	2.29	0.46	0.30	1.72	1.16
	21.10	35.59	20.90	29.16	37.75	36.54
	77.79	62.04	78.64	70.54	60.53	62.30
CHEMICAL ANALYSIS.						
Soluble in al-cohol & ether.	Hy. 1.23	3.636		2.570	3.500	1.560
	Cm. 0.53	1.76				
	0.74	0.0030		0.013	.032	.0024
		0.0025		0.008	.004	.0009
Per cent. of waxy and resinous matter.....						
	0.74	0.0164		0.031	0.036	0.0033

Soluble in water.	Berselius extract of earth and alkalis and chlorides.....	0.0349	0.0460	.007 Cl. Po.	0.0305	.032	.0237
	Organic matter, crenic acid.....	0.0086	.0208	.0058	.0105	.010	.0050
	Silica, lime and iron (tr. sul. acid in No. 2)	0.0150	.0659	Traces.	.0120	.012	.0055
	Total extract by water.....	0.0585	1.330	.0125	.0530	.054	.0343
	Per centage on the whole amount.....	0.2170	0.395	0.057	0.170	0.190	0.1110
Soluble in dilute muriatic acid.	Peroxide of iron, alumina and manganese	4.254	1.995	2.009	1.240	2.760	1.629
	Organic matter combined with iron and alumina.....	.444	1.004	0.440	0.250	0.860	0.550
	Silica soluble.....	.334	0.640	0.200	0.270	0.560	0.628
	Phosphoric acid.....	.033	0.041	Traces.	Traces.	0.041	Traces.
	Potassa and soda.....	Not det.	0.161	Traces.	Traces.	0.161	Not det.
	Lime.....	.100	1.026	2.539	0.400	0.390	0.281
	Magnesia.....	Traces.	0.236	1.280	0.017	0.280	0.102
	Total per centage of solution in acid	5.165	5.103	6.470	9.277	5.530	3.190
	Org. matter soluble by am., accompanied by alumina, and indicating apocrenic acid.....	2.000	1.840	0.420	2.330	3.140	2.530
	Org. matter soluble by soda.....	0.145	4.368	0.050	1.630	1.030	0.610
Insoluble.	Org. matter in combination with the insoluble residue, and determined by ignition.....	0.470	4.145	0.500	1.440	1.720	1.600
	Total organic matter from water, acid, alkalis, and by ignition.....	3.075	11.373	0.970	5.390	5.890	4.740
	Insoluble silicates and earthy residue..	88.949	78.842	90.270	88.430	83.010	88.520
	Loss.....	*.041	.696	1.933	1.152	1.854	1.975

* Magnesia and alkalis.

NOTE.—The above tabular statement of the results of the analyses preceding, has been made to enable the reader to compare the results more easily than by reference to the analyses. W. W. MARRAS.

REMARKS ON THE ANALYSES OF THE SOILS OF PIKE COUNTY.

BY W. W. MATHER.

It will be noticed that the most productive soils have the greatest absorptive power for water from a damp atmosphere; that they are of a brownish-black color when damp; that the organic matter dissolved by water, alkalies and acids, is greater in the same soils; that the organic matter in the rich soils varies from 4 to 11 per cent., while in the poor, nearly barren soil, No. 3, the organic matter is less than one per cent., and in the upland, good wheat soil, about three per cent.

The elements necessary for the growth of plants and for perfecting their seeds, and necessary also to form the various animal tissues and products, are found in all these soils, but in varied proportions.

Nos. 3 and 4 would be benefited by a dressing of leached wood ashes, to supply soluble silica and phosphates. Gypsum would also, perhaps, be a benefit to Nos. 1, 3, 4, 5 and 6, about a bushel being spread on an acre.

No. 3 needs a good dressing of barn-yard manure, or street scrapings, more than any thing else. No. 1 would also be benefited by any common manure.

Prof. Wells remarks upon the extraordinary degree of fineness of the soils of Ohio that have been sent to him, and that almost all passes through sieves having the meshes one-sixtieth of an inch square, or less, and that a large part of what remains is vegetable fibre—that of the insoluble residue, nearly one-half consists of impalpable particles, in fact clay—that the sand in the soils is of primary and igneous rocks.

This fineness of the soils is important in a two-fold view:

1. To increase the absorptive and retentive power of the soil, enabling the soil to absorb much moisture from the damp air in the night, and give it up to the roots of plants. This is very important in a time of drought.
2. The finer the state of mechanical division, the greater is the relative surface of the particles, and power of the roots of plants to draw the mineral elements necessary to be taken up by them, and carried into the circulation and secreted in the parts of the plants, where they are required.

This degree of fineness in the soils is common over the length and breadth of Ohio. Few of our surface soils are gravelly or even sandy.

 REMARKS ON THE GEOLOGICAL RELATIONS OF THE SOILS OF PIKE COUNTY.

The soils of Pike county are underlaid by the sandstones and shales of the Waverly sandstone series, the black shales, and the buff limestone, all of which belong to the Devonian system, and all lie below the coal formation. The sand-

stones occupy the eastern part of the county, the hills of the central portions, from east to west, and the caps of the high hills on the western part of the county. The slate lies below the valleys on the east, in the valleys in the central parts, and forms the hills of the western part. The limestone occupies the valleys in the west and northwest parts of the county, and passes below the slate to the eastward, so as not to be seen except by digging deep wells in the central parts of the county.

The soil of the alluvial bottoms varies in texture and composition — in texture, dependent on rapidity or slowness of its motion when deposited — in composition, according to the greater or less mingling of the materials derived from the attrition and disintegration of these various rocks and the various wrecks of dead animals and plants.

Each valley has a soil more or less varied, in consequence of the relative amounts of the wash from these various rock formations.

The soils of Waverly and the Scioto valley below, are formed of the detritus brought down by Salt Creek, on the east and northeast, from the coal formation; by the Scioto, from the limestone and slate formation; the Darby and Paint, in the same formation; and the Big Walnut, Little Walnut, Kinnikinnick, and other smaller streams, from the Waverly sandstone and slate. The detritus from such a variety of rocks, all of which are sedimentary, and more or less replete with the reliques of former organic life, must almost necessarily contain all the elements necessary for the sustenance of vegetation.

Alluvial soils have always been celebrated for their fertility; and the reason is found in the blending together of all the organic and inorganic elements necessary for the assimilation and secretion of plants, to favor, in the highest degree, their growth.

The hill soils derived from the disintegration and decomposition of rocks, although they contain less organic matter, are not wanting in the elements of fertility. The rocks of which these soils are formed, were once sand and sediment in the ocean; and contain much of all those mineral elements, as well as some of the organic elements of plants. Wheat is raised of better quality, on such soils, than on the alluvial lands. The great wheat belt of Ohio is on the Devonian and carboniferous systems of rocks.

Each rock formation, where it is not covered by washed deposits of more recent age, has a soil more or less peculiar, which, in its natural state, is covered with its groups of certain kinds of timber growth, and these serve to characterize each of the prominent kinds of soil.

SOILS OF ROSS COUNTY.

These were collected at three several times during the summer of 1881, when the duties of the office would permit the Corresponding Secretary to be absent for a few days.

The 11 soils described by their localities and timber growth, represent the prominent soils of Ross county. The limestone soils of the western and southwestern parts of the county are yet to be selected; and perhaps another or two may be required from Huntington township, to represent the soils of the hills of that part of the county.

The soils of each valley, where the waters wash the wrecks of different rocks, must be expected to differ, both in mechanical texture, in chemical composition, and organic contents. These variations, in connection with the relations of the surface to water, cause the great variation in the productiveness of soils. The soils have been selected so as to represent the prominent and characteristic soils of the county, and the results of their analysis will be laid before the public as soon as completed.

(A) Soil on Robert Simpson's farm, of 2d bottom, Salt Creek valley, from west side of the road from Richmond to Londonderry, and about one quarter of a mile north of Richmond. This land has been cleared about 30 years, and cropped with corn a few times, but has been in grass as pasture most of the time. It is now in corn that is backward. The field has never been manured, but has been used some for feeding cattle. Timber, white oak, beech, sugar, pin oak, and a little black walnut.

(B) Soil of Simpson Jones' farm. Flats on 3d bottom, Sec. 8, T. 8, R. 20. Pasture field; cleared 30 years; fully one-half the time in corn, one-third in timothy and clover, and the rest as pasture; never manured.

This soil represents a large amount of the upland soil of the eastern part of Ross county. It is a clayey soil on top, sand and pebble beds below—pebbles of sandstone, with some of primary and trappean rocks, and a little lime pebble. White oak, and some black oak and hickory was the timber growth.

(C) Soil and subsoil of Simpson Jones' farm, from the low bottom (but above overflow) of Walnut creek, on north side of the road from Chillicothe to Londonderry, on Sec. 8, T. 8, R. 20. The land used to be good to produce corn and other grain, but for some years past, although it produces heavy crops of grass, clover, and timothy, it does not produce good grain crops, and Mr. Jones thinks the timothy exhausts the soil of some principle necessary for the grain. It has been cultivated as follows, viz:

Corn, in succession, after clearing -----	10 years.
Clover -----	2 "
Oats -----	1 "
Corn -----	2 "
Clover and timothy -----	2 "
Oats -----	1 "
Corn -----	2 "
Wheat -----	1 "
Clover and timothy -----	3 "
Corn -----	2 "
Wheat -----	1 "
Timothy -----	3 "
	<hr/>
	30 "

NOTE BY MR. JONES.—“I have been particular in ascertaining the rotation of crops, from the fact that there seems to be something *peculiar* about this soil. Though of good depth and appearance it has certainly lost much of its former fertility. *Timothy* grows luxuriously now as when first tried.”

“Most respectfully yours,
“S. JONES.”

REMARK.

The subsoil was observed to be very hard and within five inches of the surface. Roots of plants cannot penetrate it, and specimens of the surface soil and subsoil were taken. I think the subsoil plow, by loosening the subsoil to allow the roots to penetrate, and prevent the drouth drying up, or heavy rains flooding and drowning the plants, would make it productive. The grass shelters it from the hot sun and is not so much affected by surplus water as grain.

W. W. MATHER.

(D) Soil from a wheat field on the top of a high hill, that the road from Hallsville to Chillicothe crosses, on the divide between Walnut and Dry Run, about 9 miles from Chillicothe. The soil is a clay, good wheat land, and the native growth is oaks of various kinds. Lower in the hill the soil is reddish.

(E) Soil of the 2d bottom of Scioto, some $1\frac{1}{2}$ miles southeast of Chillicothe, on north side of road from Chillicothe to Richmond, about ten rods west of the gateway entrance to Henry Renick's residence. This soil has been partially cleared (many trees still remaining,) and in grass, and has never been tilled. On the opposite side of the road is land long cultivated in corn and now covered with a very heavy crop of wheat. The timber growth on this land was elm and pin oak, and honey locust, with some white oak and black walnut.

(F) Soil from the 1st bottom, the farm of James Vause, but above the highest overflows. The soil is a dark sandy loam, from near two locust trees, about 500 yards south of the house. The land has been cleared at least 40, and probably 50 years, and in corn or grass, all, or nearly all the time. This soil is supposed to represent the average of the 1st bottoms between Paint and Salt creeks.

(G) Soil of Paint Creek, 1st bottom. This was taken about 1 mile from Chillicothe, on the northeast side of the turnpike from Chillicothe to Portsmouth, near a farm gate, where the turnpike begins to ascend the hill. This land has long been cleared and cultivated.

(H) Soil from the hill land of the western part of Ross county, characterized by the drift formation. This was taken from the farm of Lewis Rose, about two miles east of Frankfort, or Old Chillicothe, near the road, on the north side, from a corn field that has been cultivated 30 years in corn, wheat and oats, and three years in grass. The land is good wheat land, and bears reasonably good crops of corn and other grain. The soil is upland loam, with subsoil of drift pebbles, gravel, boulders, and clay. The original timber growth, when cleared, is said to have been white oak, hickory and dog-wood.

(I) Soil from the black flat prairie land, one mile north of Frankfort, or Old Chillicothe, on the farm of Mr. McNeil. This is a black, peaty soil, from one to three feet deep, overlying a yellow loam, containing limestone and chert gravel. This soil has been cultivated in corn 40 years, and is still very productive. It is not drained so much as to suffer from drouth, as this soil generally does, unless slightly drained, and the roots of plants can reach the subsoil, which is not hard.

(K) Soil of the hills of the Waverly sandstone formation. This soil was taken from the side of the 10 mile-stone from Chillicothe, towards Portsmouth, on the turnpike. It is the unchanged forest soil, never cleared nor cultivated. It is a mixture, of a uniform mass, of the soil from the surface to the depth of a foot. The timber growth, white oak, black oak, pin oak, Hickory, &c.

(L) Slate from Mr. Hammonds farm, 8 miles from Chillicothe, on the Portsmouth turnpike. It is bituminous shale from between the strata of Waverly sandstone, and will blaze in the fire, and an opening was made by Mr. H., supposing it would lead to coal. A handful of the slate put to a hill of corn is said to improve its growth. To be analyzed to test the reason.

ESSAY ON THE SOILS OF OHIO,

BY W. W. MATHER,

CORRESPONDING SECRETARY OF THE OHIO STATE BOARD OF AGRICULTURE.

Submitted to the Board, December 3d, 1851.

PROGRAMME OF ESSAY ON THE SOILS OF OHIO.

- A.—On the geological relations of the soils of Ohio.
- B.—Modifying circumstances on the character of soils.
 - Characters of soils.
 - Mechanical texture.
 - Chemical composition.
 - Influence of water.
- C.—Deterioration of soils.
 - Soils in a state of nature.
 - Natural rotation of vegetation.
 - Soils in a state of culture.
 - Exhaustion by cropping, grazing, &c.
- D.—
 - { Relation of the sciences to agriculture.
 - { Improvement of soils.
 - 1. Requisites for vegetation.
 - 2. Composition of the ash of plants.
 - 3. " " soils,
 - 4. Mechanical change in texture.
 - 5. Drainage.
 - 6. Mineral manures.
 - Organic " night soil, &c.

(A.)

ESSAY ON THE SOILS OF OHIO.*

GEOLOGICAL RELATIONS.

The rocks that underlie the State of Ohio are all derived from the crumbling up and decomposition of more ancient rocks, and the particles, and fragments, and pebbles, of which they are composed, have been washed far away from their parent sources, and deposited by the action of ocean currents, in ancient times, in the bottom of an ocean that formerly covered the whole valley of the Mississippi, and a large portion of that of the St. Lawrence. All these rocks are ancient sediment of the ocean, and in most parts of Ohio they are replete with the remains of ancient organic beings, as shells, fish, plants, corallines, &c.; and these wrecks of organic existence are so perfect as to show that most of them lived and died in the sea, and were buried in the sediment, where their remains are now found. This sediment has since become hardened into the rocks that form the substratum of Ohio and other western States.

The sediment of which these rocks were formed, came from the decomposition and washing away of almost every variety of known rocks, as the microscope renders evident, and they therefore contain all those mineral elements necessary for the growth and perfection of plants. The fossil remains of animals, also, supply in greater abundance than other parts of the rocks, supplies of *special* mineral elements, that the grains and seeds of plants require for their perfection.

The soils of Ohio are derived from the crumbling up of these various rocks; and over most of the State, the subsequent action of currents of water has intermingled these wrecks of the rocks of Ohio, and of the vast region to the North, so as to make a more perfect mixture perhaps, than that which formed the rocks themselves. I allude here to the drift, or Diluvial deposits, as they are called, which cover a large portion of the western, middle, and northern parts of the State.

At a still more recent period, these deposits, as well as the rocks proper, have been for unknown ages of time, exposed to the ordinary atmospheric changes, and the wash of water, and the influence of organic life; and these causes have eventuated in the formation of other classes of soils, such as our upland soils, and the alluvial soils of the vallies of the streams, and of the prairies.

*This Essay was commended by the Board, and admitted to be the best Essay submitted to them, but was not allowed to compete for the premium offered, because its author was the Corresponding Secretary of the Board.

These various causes have produced such an intermingling of the particles of all classes of rocks and their contained minerals, (now consolidated in the forms of slate, sandstone and limestone ; or in an earthy state, as clay, loam and sand ; or hard pan, which is a mixture of clay with gravel and pebbles and boulders)—as to meet all the requisites of the wants of vegetation. All these geological changes of which we trace the effects in the solid floor of the earth, and in its loose earthy covering, seem to have been the result of a far seeing wisdom of the Creator and governor of all things, not only for the enjoyment and happiness of the beings that then inhabited the earth and the ocean, but to prepare a fit abode for man and other creatures of his power, and store it with all things necessary for their wants and enjoyment.

The soils of the great valley of the west are very different from those of the eastern States, and are far more fertile than those regions of primary rocks in New England and Canada, and for reasons that may be understood from what precedes.

Another reason for their greater fertility is the greater degree of fineness of their particles, so that most of the soil passes through the finest gauze, and the particles being so minute, a greater surface is exposed relatively in a given mass of earth, both to decomposition and to the action of the rootlets of plants in seeking their appropriate mineral food. Again, this fineness of texture increases the power of absorbing moisture from a damp atmosphere in the night, and retaining it in reserve for the roots of plants to which it yields it as they require.

The soils of the eastern States are coarser, containing much gravel and sand or stones, and are generally too porous for the severe drouths to which most of Ohio is frequently subject in summer. The porous open soils, so prevalent there, are not so objectionable as they would be here. The fogs from the ocean, and general dampness of the climate from proximity to the ocean, give sufficient moisture for vegetation. The slope of Ohio towards Lake Erie has a climate somewhat analogous in regard to moisture, and caused also by the proximity of Lake Erie. Soils there, of a similar geological, chemical and mechanical constitution to those of some other parts of Ohio, in consequence of the greater moisture and coolness of the climate, are characterized by a different kind of vegetation, and are better adapted to certain kinds of cropping. Flax, oats, and potatoes thrive better and give greater average crops on soils in northern Ohio than in other parts of the State, as may be seen by consulting the statistical reports of the counties in the reports of the Board, not because the soils are better adapted for their production, but because the cooler and more moist climate is better adapted for their growth.

The soils of eastern and south-eastern Ohio, from Portage county to the mouth of the Little Scioto, on the Ohio river, are formed of the decomposed rocks of the Coal formation.

Those of the northern counties along the Lake shore, from the N. E. part of the State to Huron river, and thence southwardly to Adams county, westward of the preceding, are derived from the sandstone and slate rocks called the Waverly sand-

stone and black slate. These rocks belong the upper part of the Devonian system of geologists, and form a curved belt along the northern and through the central parts of the State.

The soils westward of this belt are calcareous, overlying limestone, and are composed of mingled wrecks of these rocks with the drift formation, which covers most of this part of Ohio.

The soils of each of these great divisions of Ohio are very varied ; but the geological formations on which they rest, and of which they are mainly composed, have impressed a general character on each of these belts, and each of these groups of soils requires a separate consideration. The lack of a sufficient number of accurate analyses of these classes of soils, renders it impossible to give them that careful discussion that is desirable, and which they can receive only when they shall have been carefully studied, and many of them shall have been accurately analyzed. The analysis of the soils of Ohio has been commenced, and it is to be hoped that such aid may be granted, that the soils of every county shall be carefully studied.

The soils of Pike county have been analyzed, and the results promise to be important to the farming community.

(B.)

CLASSIFICATION OF SOILS AND MODIFYING CHARACTERS OF SOILS.

Soils may be variously classified. A very common classification in the western States is, into bottom soils and upland soils. These are very natural divisions, and each contains several similar subdivisions, viz :

- (1.) Clayey.
- (2.) Sandy.
- (3.) Cold.
- (4.) Peaty.
- (5.) Warm.

The three first kinds are dependent on the mechanical texture of the soil ; the fourth is dependent on the presence of water, which, by evaporation, gives a greater degree of coldness, and the water also fills the pores of the soil. This prevents the access of air, and the warmth of the sun's rays, both of which are necessary to the vigor and perfection of the plants commonly cultivated. The impervious nature of the subsoils is usually the cause of wet, cold soils, where the land is nearly level.

Peaty soils are mostly composed of partially decomposed vegetable matter, more or less intermingled with earthy matter. These are always alluvial, and occur in marshy grounds or on flat lands, except in cool and moist climates, and in such regions peaty soils are found sometimes on the mountain slopes.

Warm soils are generally sandy or loamy, and porous enough to be readily pervious to air, water, and the warmth of the sun.

The clay soils are very abundant in most parts of Ohio. They are more common on the uplands than on the bottoms. They vary, from tenacious, red, gray, and yellow clays, to a heavy loam. Some of these tenacious clays are very productive soils for wheat and corn, such, for example, as those of Washington, Gallia, Meigs, and Athens counties.

Loamy soils are the prevailing soils of Ohio. They vary much in texture and composition, from a heavy to a light sandy loam. They are the prevailing soils not only on the uplands, but also on the alluvial bottoms, along the valleys of the streams. The light *sandy loams* are found mostly along the immediate banks of the streams where they overflow, or on those plains in the valleys of all our larger streams called the first and second bottoms.

Almost all these plains are underlaid by beds of loose gravel and pebbles, composed not only of the rocks of the country adjacent, but of far distant regions to the northward, across the great lakes.

The *cold soils* are seen in the wet flat lands of the Barrens in Fayette, Madison, and many other parts of the State, and in some of the Lake counties. These lands, by suitable culture, soon change their character, and become good soils. Ditching and sub-soiling are the main methods of improving such lands in Ohio. Under-draining would be better, but the value of land, the cost of labor, and the sale value of the agricultural products, will not, as a general rule, warrant this kind of improvement at present. These cold soils are found in almost every part of the State more or less abundantly, where the drift deposits form the sub-soil. These deposits occupy a large share of the western half of the State.

Peaty soils are found in the flat marshy lands in the central and northern parts of Ohio. Some localities have been observed near Circleville and Lancaster, but none of any importance farther south. Along the divide of the waters of the Ohio and Lake Erie, these soils abound, and thence northward to the Lake. These soils, when drained and plowed, produce good corn, grain and potatoes, if they be not too dry, so as to blow away as dust, and if they be not too moist. Most of the peaty soils, however, are so nearly all vegetable matter, that they scarcely furnish sufficient mineral matter to the plants and grains to bring them to perfection. I am not aware that many experiments in cultivation of crops have been made on this soil in Ohio, except some fields noticed within a few miles of Sandusky and Mansfield and Huron.

Peaty soils are very valuable to mix with other manures, to improve soils that lack a sufficient supply of organic matter. Peaty soils in the New England states, are often brought into a high state of cultivation by drainage, and a heavy top-dressing of earth. The latter mode of improvement can scarcely be employed in Ohio, as yet, except in a few favored localities, where land and its agricultural products are of more value than in most parts of the State.

The productive characters of soils depend,

- 1st, On their mechanical texture ;
- 2d, " chemical composition ;
- 3d, " organic matter capable of becoming food ;
- 4th, " sub-soil and its relations to water ;
- 5th, " local climate.

The agricultural characters of a district are dependent, not only on the preceding, but on the geological structure and the topographical characters and features of the country. These tend greatly to influence drainage and temperature.*

The soils on the N. and E. hill sides are always rich in organic matter, and are more productive than on the S. and W. hill-sides. The S. and W. hill-sides receive more fully the heat of the sun, and organic matter decays more fully, than on the N. and E. hill sides. Again, the leaves and dry plants in the autumn and winter, where the fires run through the woods, destroy nearly all the leaves and dead vegetation, on the S. and W. hill-sides, where they are most dry. These causes sufficiently explain the fact, above alluded to, that the soils on the N. and E. hill-sides are richer than on the S. and W.

C.

DETERIORATION OF SOILS.

In a State of nature, soils do not deteriorate, but are maintained in a state of uniform or increasing richness.

The trees and plants of spontaneous growth, are of various kinds. Each takes certain elements from the soil, and from the air, the rain, and dew ; but the decay of the various parts of the trees and plants, and the reliquiae of the various animated beings that subsist on vegetable and animal life, restore to the soil those elements that had been taken from it, except the small quantity removed by the washing action of water—and even this is compensated on the hills by the washing away of the surface soil, and exposing fresh mineral matter to decomposition—and on the low grounds by their receiving the unexhausted materials washed from the higher.

Trees draw their mineral elements from a greater depth than the roots of smaller plants, and by their decaying leaves, furnish both organic and inorganic food to themselves, as well as to the smaller plants beneath them.

The excrementitious parts of one plant serve as food to others, so that certain associations of plants and trees are always found, in a state of nature, to characterise certain kinds of soil.

There is a natural rotation of timber growth, so that as soils become more or less loaded with excrementitious matter, so as to be no longer capable of producing

* This subject of the modifying circumstances of soils was intended to be fully discussed, but time did not permit before the meeting of the Board.

a vigorous growth of the same trees and plants, another growth of different trees and plants succeeds.

This order of succession has been partially traced,* but many and long continued observations will be necessary to trace out the natural rotations of the different kinds of timber, on the different kinds of soils. The kinds of rotation best for some of the annual plants raised for the food of man and animals, on some kinds of soils have been ascertained, but little is known of the general laws that may and ought to be ascertained.

Under culture, soils deteriorate unless they are regularly manured. The removal of any crop, natural or artificial, removes elements that must be restored, in order that its fertility should not be impaired. Mineral acids, alkaline earths, silica in a soluble state, chlorine, iron, &c., are removed, equal in weight to the ash that would be obtained by burning the plants removed. Most of these elements exist in a very minute proportion in the soil in a state to enable the roots to absorb, and plants to assimilate them, so that continued cropping, without returning any thing, will soon exhaust one or more of these elements, and the land becomes poor, and must be manured with something to supply the lacking elements—or it must be left at rest in fallow, as it is called, to give time for more of the mineral elements to be liberated, by the gradual decomposition of the particles of minerals in the soil.

Crops removed from the ground carry away not only a large amount of vegetable matter, but also those mineral materials taken up by plants, small in amount, it is true, but indispensable to the perfection of the plants raised.

The straw, stalks, and leaves of the plants, if returned, restore in part the waste; but still, the phosphates which enter in large proportion in the mineral elements of the seeds, are found in small proportions in the other parts of the plants, and the soil becomes gradually impoverished of the elements which are small in amount in all soils, but which are indispensable to the growth and perfection of the seeds of plants. Soils may be and frequently are capable of producing a rank growth of straw, which produce a small yield of grain. Plants will not produce more seeds than they can perfect.

Of the exact composition of the soils of Ohio, little is known, as few analyses have been made. Of the exact composition of the various grains, plants, and their different parts, as well as vegetables, comparatively little is known; but the relations of the plants and the soil on which they grow, and what and how much is taken from the soil by these plants in each stage of their growth, and how much is removed by our mode of culture, are important facts to be known to the farmer.

It is not mere cropping alone with grain, that causes a deterioration in our soils. The flesh, wool, hair, horns, bones, butter, cheese, produced by grazing and marketing our farm products, carry away large quantities of elements from the soil that impoverish it, and diminish its productiveness. The results of this system are

* 5th Ann. Rep. O. S. Board Ag.; article on this subject by Rev. C. Springer.

now beginning to be felt as much in the dairying, grazing, and sheep farms of Ohio, as where grain has long been raised. The mineral elements removed in the numerous agricultural products, are more or less concentrated in cities and villages, where they are permitted to be lost, or they are sent to far distant markets, where they are lost to us forever.

D.

RELATIONS OF THE SCIENCES TO THE IMPROVEMENT OF SOILS.

The consideration of this branch of the subject requires some preliminary discussion of the relations of agriculture with the sciences and the requisites for vegetation.

Agriculture is both a science and an art. As a science, it traces out the principles involved and the natural laws connected with chemistry, minerology, geology, zoology, botany, and meteorology.

As an art, it consists in producing the greatest quantity and best quality of marketable products, at the least expense, without impoverishing the soil.

The practice of the art understandingly, implies a knowledge of the capacities of the soils to produce particular crops, or successions of crops, and of the best modes of tillage to be applied under the varied circumstances in which lands are situated with regard to their marketable products, their soils, climate, value of land, cost of labor, and manures of various kinds, that the wants of the soil might require.

Chemistry, as connected with agriculture, traces out the constituent parts of plants, animals, soils, rocks, mineral manures, and the atmosphere—the conditions of soil, climate, temperature, and food, that tend to promote, modify, or retard vegetable and mineral developement—the action and influence of air, water, and their elements and contents upon soils, rocks, plants and animals—and the action of manures and various substances added to the soil to improve its texture, and increase its productiveness.

Minerology makes known what *kinds* of minerals are found in the soils and rocks, several of which are indispensable for long continued fertility, where the crops are wholly or in part removed.

Geology shows the kinds of rocks, their mineral composition, their distribution over the surface of the earth, the order in which they are arranged, how to find particular rocks on and beneath the surface of the earth, that may be needed for use for mineral manures or other purposes—it traces out the action of water, of the atmosphere, heat and cold, and all the agents that serve to modify the surface of the globe.

Zoology, as connected with agriculture, leads to a consideration of the habits and characters of animals that are employed for labor, for food, for their products

for manufacture—to an investigation of their diseases, the best modes of rearing, breeding, feeding, &c.—to the study of insects, worms, &c., that are detrimental to grains, fruits, vegetables, &c.—and the best modes of avoiding or remedying their depredations.

Botany, also, can be studied with advantage to learn many useful facts in regard to the characters and habits of plants, how they may be cultivated to advantage, and how noxious plants may be eradicated or turned to account.

Meteorology has also an important bearing on agriculture. The study of the seasons, the weather, winds, dews, fogs, clouds, temperature, and the effects of their single and combined influences on vegetation, are becoming every day more evidently important.

Physiology, animal and vegetable, should also be studied in its various bearings connected with agriculture.

The agriculturist does not need the *details* of all the varied investigations suggested under the sciences alluded to, but he needs the *results* of such investigations, and directions as to the best modes of applying those results *practically* to useful purposes.

ON THE IMPROVEMENT OF SOILS.

Before soils can be renovated understandingly, that have been partially or entirely exhausted by cultivation, it is necessary that the agriculturist understand—

- 1st. The requisites for vegetation.
- 2d. The mineral elements drawn from the soil by vegetation, and which are contained in, and may be ascertained by analyzing the *ash*.
- 3d. The compositions of the soils, and the proportions of those elements in the soil available for and necessary to plants.

(1) *On the requisites for vegetation.*

(a) All plants draw their nutriment from the earth and the atmosphere (the mineral kingdom).

(b) All animals subsist directly on vegetation or on other animals, and their nutriment comes directly or indirectly from the vegetable kingdom.

(c) All the elements of animals are drawn from the mineral kingdom, through the aid of the vegetable kingdom.

(d) All animals and plants die and decay, and all the products of their putrefaction return to the atmosphere and the earth, from which they originated. These products are again absorbed and assimilated by plants, and serve as food for successive generations of animals and plants, for indefinite periods of time.

The conditions necessary for vegetation are—

- 1st. Moisture.
- 2d. Warmth.
- 3d. The presence of air.
- 4th. The light of the sun.
- 5th. A soil.

It is necessary that the moisture in the soil should be neither in excess for plants commonly cultivated, so as to shut off the access of air, nor in defect, so as to leave the soil hard and baked around the fibrous rootlets.

The warmth is most favorable for most kinds of vegetation between 60 and 90 deg. of F.

The presence of air is necessary, in connection with moisture and warmth, to make seeds germinate. Air is ever after necessary to the plant, and from it much of its carbon is assimilated and secreted by decomposition of the carbonic acid and evolution of oxygen. In the animal kingdom, on the contrary, the lungs take oxygen from the air, to combine with and remove the excess of carbon from the blood, and this combination is exhaled from the lungs as carbonic acid.

The light of the sun is necessary to the growth and perfection of plants. They cannot become green, nor develop the woody fibre, nor produce the particular acids, sugar, and other parts prized in the vegetable kingdom, without the sun's light.

Plants cannot absorb nor assimilate the mineral elements, nor come to maturity and produce seed, without a soil. This soil must contain all those mineral elements that enter into the constitution of the plant; and it must also contain such a quantity of each of those elements, and in such a condition of solubility, as to afford to the plants a sufficient quantity of these specific kinds of food, for the healthy and full development of the plant in all its parts.

The soil must also contain organic matter from decaying or partially decayed animal or vegetable matter, which is more or less used as food by growing plants.

Since it has become known that certain mineral elements are indispensable to the perfection of plants and grains, the importance of organic manures has not been sufficiently prized; but the right sentiment is again felt, as we know that they also are highly important as food for plants.

(2) *On the mineral elements drawn from the soil by vegetation.*

The analyses of the ashes of various grains, plants, roots, fruits, &c., indicate the quantities of mineral elements necessary for their growth, and these mineral elements must exist in the soil, or in manures or dressings of the soils, in such a condition that they can be absorbed by the fibrous rootlets, and assimilated by the plants.

ANALYSIS OF THE ASH OF GRASSES.

	1. Meadow foxtail.	2. Sweet scented vernal grass.	3. Crested dogtail.	4. Timothy.	5. Lucern.	6. Red clo- ver.	7. White clover.	8. Red-top.	9. Rough meadow grass.	10. Spear grass.
Phosphoric acid	6.25	10.09	7.24	11.29	5.96	8.80	5.53	13.17	19.35	14.98
Sulphuric "	2.16	3.39	3.20	4.46	2.85	5.98	3.86	7.30	8.91	0.20
Carbonic "	0.65	1.26	-----	4.02	26.48	-----	-----	-----	-----	-----
Lime	3.90	9.21	10.16	14.94	45.95	37.09	25.72	10.03	0.05	3.54
Magnesia	1.28	2.53	2.43	5.30	3.61	4.45	3.34	6.64	0.02	1.99
Per oxide iron	0.47	1.18	0.18	0.27	0.75	0.20	2.77	-----	-----	-----
Potassa	37.03	32.03	24.99	24.25	9.99	26.70	34.00	4.92	9.13	15.62
Chloride of potassium	9.50	7.03	11.60	0.70	1.54	-----	-----	-----	-----	-----
" sodium	-----	4.90	-----	3.24	1.90	-----	-----	-----	-----	-----
Silica	38.75	28.36	40.11	31.08	0.59	4.85	16.13	41.90	35.25	56.32
Soda	-----	-----	-----	-----	-----	7.07	6.34	9.61	19.84	6.82
Alumina	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Chlorine	-----	-----	-----	-----	-----	4.86	2.31	2.00	2.44	0.86
Per cent. of water in green grass	80.20	80.25	62.73	57.21	69.95	-----	-----	-----	-----	-----
" " ash	1.55	1.24	2.38	2.26	3.04	-----	-----	-----	-----	-----

Nos. 1, 2, 3, 4 and 5, were grown on an oolitic or calcareous soil, near Cincinester, England, and were analyzed by Prof. A. Way and Ogston. Jour. Royal Ag. Soc., vol. xi, p. 533. Working Farmer, vol. iii, p. 173.

Nos. 6 to 10, from Trans. N. Y. Ag. Soc., 1850, p. 616, analyzed by J. H. Salisbury.

ANALYSIS OF THE ASH OF STRAW OF GRAINS.

	1. Wheat straw.	2. Barley straw.	3. Rye straw.	4. Oat straw.	5. Indian corn stalks.	6. Bean vines.	7. Peavines.	8. Rice straw.	9. Flax straw.
Phosphoric acid	3.07	3.08	3.82	1.54	17.08	7.24	4.83	1.00	13.05
Sulphuric "	5.82	1.63	0.83	6.46	1.19	1.08	6.77	4.00	3.19
Carbonic "									
Lime	6.70	9.53	9.06	3.15	7.98	19.99	54.91		14.85
Magnesia	3.82	3.22	2.41	1.09	6.64	6.89	6.88	5.	9.88
Peroxide of iron	1.30	0.83	1.36	1.95	0.81	0.22	0.40		7.32
Alumina		1.39	Trace.			0.32	1.21		
Potassa	13.44	6.31	12.36	3.15	9.62	53.08	4.73	14.	51.78
Soda	0.16	0.61	0.31		16.30	1.60			11.82
Silica	65.38	70.58	64.50	76.16	26.97	7.05	20.03	74.	25.71
Chlorine	1.09	0.97	0.46	0.73	3.42	2.56	0.009		2.90
Chlorine Sodium									
Oxide Manganese						0.16	0.15		

1, 2, 3, 4 and 5, analysis of J. H. Salisbury, Trans. N. Y. Ag. Soc., 1850, p. 616.
 6, 7, " " " " " " 1849, p. 227.

8, Boston Jour. Ag., vol. i.

9, from Johnson's Lectures, Trans. N. Y. Ag. Soc., 1849, p. 394.

ANALYSIS OF THE ASH OF GRAINS.

	1 Wheat.	2 Barley.	3 Rye.	4 Oats.	5 Indian Corn.	6 Beans.	7 Peas.	8 Rice.	9 Flax-seed, Russian.	10 Flax-seed, German.	11 Indian Corn, raised at Albany.	12 Broom-corn Seed.	13 Buckwheat.
Phosphoric acid	49.81	38.93	49.55	43.84	44.87	37.57	32.29	53.	36.42	37.64	49.210	28.76	49.85
Sulphuric acid	0.24	0.10	0.98	10.45	12.77	1.00	4.36	---	2.47	2.16	0.51	Not deter.	1.55
Carbonic acid	---	---	---	---	---	---	---	---	---	---	---	---	trace
Lime	2.81	2.62	4.93	6.95	1.44	6.77	5.29	1.	8.46	8.12	0.07	0.84	3.01
Magnesia	13.03	7.46	10.35	9.95	16.22	7.99	8.46	12.	14.88	14.52	17.60	3.01	15.84
Perox iron	0.67	1.48	1.36	0.40	0.30	0.38	0.99	---	1.25	0.68	---	Phos. 0.52	none stated
Alumina	---	0.21	---	0.06	---	---	---	---	---	---	---	---	---
Potassa	23.72	13.64	20.08	26.18	32.48	33.56	36.05	34.00	17.59	30.01	23.17	3.92	21.27
Soda	9.05	8.14	11.67	---	---	10.60	7.42	---	6.92	1.88	3.60	7.25	2.32
Silica	1.27	27.10	0.43	2.67	1.44	1.15	0.51	---	10.58	5.60	0.85	41.97	1.95
Chlorine	---	0.04	---	0.26	0.18	0.73	---	3.	0.17	0.29	0.29	0.24	0.30
Chloride of sodium	---	---	---	---	---	---	3.13	---	---	---	---	---	---
Sodium	---	---	---	---	---	---	---	---	---	---	0.16	---	---
Organic acid	---	---	---	---	---	---	---	---	---	---	5.70	4.20	2.75

1, 2, 3, 4—Analysis of J. H. Salisbury, N. Y. S. Ag. Soc. Trans., 1850, p. 616.

6, 7—“ “ “ “ Boston Jour. Ag., vol. 1.

8—“ “ “ “ Boston Jour. Ag., vol. 1.

9, 10—Analysis from Johnson's Lectures, N. Y. Soc. by Trans., 1849, p. 394.

11—“ “ of J. H. Salisbury, N. Y. Ag. Soc. Trans., vol. viii. Also, 4th An. Rep. O. S. Board Ag., p. 261.

12, 13—J. H. Salisbury, Patent Office Report, 1849, p. 473-4.

ANALYSIS OF THE ASH OF VEGETABLES.

	PARSNIP.		BEET, (RED.)		TURNIP.		POTATO.		BEET—WHITE SUGAR.
	Root.	Top.	Root.	Top.	Root.	Top.	Root.	Top.	
Phosphoric Acid.....	10.55	4.81	9.35	8.20	6.69	-----	12.57	-----	10.80
Sulphuric Acid.....	4.30	3.92	1.65	3.05	13.15	-----	13.65	-----	1.76
Carbonic ".....	28.20	22.51	16.27	21.90	-----	-----	-----	-----	17.31
Lime.....	3.65	1.32	1.50	10.25	12.75	-----	2.07	-----	1.85
Magnesia.....	1.60	0.51	1.15	4.10	4.68	-----	5.28	-----	1.09
Perox iron. } Alumina .. }	-----	-----	-----	-----	0.89	-----	0.52	-----	-----
Potassa.....	8.50	5.33	13.10	7.70	39.82	-----	55.75	-----	13.42
Soda.....	40.25	54.32	53.65	37.30	10.86	-----	1.86	-----	60.84
Silica.....	0.65	0.93	0.85	2.55	7.05	-----	4.23	-----	0.78
Chlorine.....	0.60	3.13	0.81	0.60	3.68	-----	4.27	-----	0.78
Chloride of Sodium.....	-----	-----	-----	-----	-----	-----	-----	-----	-----
Oxide Manganese.....	-----	-----	-----	-----	-----	-----	-----	-----	-----
Phosphate of Iron.....	0.70	1.43	1.15	3.75	-----	-----	-----	-----	0.91
Per cent. water in fresh.....	90.55	89.12	89.09	90.57	-----	-----	-----	-----	90.55
do dry matter.....	9.45	10.87	10.91	9.43	-----	-----	-----	-----	9.45
do ash in green.....	0.99	1.76	1.08	1.85	-----	-----	-----	-----	0.99
do in dry.....	10.53	16.18	9.07	19.61	-----	-----	-----	-----	10.53

ANALYSIS OF THE ASH OF VEGETABLES.

	Tomato.* (Large red.)	Egg Plant.† (Large oval purple.)	Rheubarb.‡ Stem.
Carbonic Acid.....	11.050	4.725	9.400
Sulphuric Acid.....	1.790	4.740	10.723
Phosphoric Acid, and per ox. iron.....	24.075	28.775	17.200
Silicic acid.....	1.775	1.700	0.450
Lime.....	0.075	0.075	3.574
Magnesia.....	1.610	1.370	0.200
Potassa.....	20.805	20.510	8.096
Soda.....	25.535	31.870	33.261
Sodium.....	2.790	1.135	0.973
Chlorine.....	4.245	1.730	1.480
Organic Acid.....	4.550	2.200	12.150
Water in fresh plant.....	94.758	91.353	89.50
Dry matter in fresh plant.....	5.242	8.647	10.50
Ash in fresh plant.....	0.334	0.604	1.13
Ash calculated on dry plant.....	6.372	6.981	10.76

*Transactions New York State Agricultural Society, 1848—page 370.

†	do	do	do	do	374.
†	do	do	do	do	1849 746.

TABLE I.—Showing the aggregate quantities of mineral and vegetable matters, and of water, in 100 parts of food, for men and animals, raised near Vienna and Giessen, calculated from the analyses of Prof. E. N. Horsford, in 1848.*

SEEDS AND ROOTS ANALYZED.	Mineral constituents.		Vegetable matter in 100 parts, free of water and mineral matters.	Water.
	Sulphur.	Ashes.		
Wheat of Hohenheim	0.12	2.37	82.08	15.43
Wheat Flour of Vienna	0.19	0.60	85.38	13.63
Rye (Rush) of Hohenheim	0.15	2.04	84.09	13.82
Rye Flour of Vienna	0.18	0.91	85.13	14.68
Corn (yellow Indian)	0.13	1.63	83.28	14.96
Corn meal (sifted)	0.12	0.74	85.88	13.36
Barley (winter)	0.16	4.75	81.29	13.80
Oats (Kamschatka)	0.14	2.84	84.31	12.71
Oats (white paniced)	0.17	3.60	83.29	12.94
Rice (common)	0.07	0.30	84.49	15.14
Buckwheat (Tartarian)	0.09	1.97	83.75	14.19
Buckwheat meal	0.06	0.92	83.90	15.12
Peas (table) Vienna	0.11	2.75	83.71	13.43
Peas (field) Giessen	0.11	2.24	78.15	19.50
Beans (table) Vienna	0.11	3.79	82.79	13.41
Beans (large white) Giessen	0.11	3.40	81.31	15.18
Potatoes (white) do	0.03	0.90	24.12	74.95
Potatoes (blue) do	0.03	1.04	29.99	68.94
Carrots do	0.02	0.80	13.08	86.10
Beets (red)	0.03	1.21	17.15	81.61
Beets (yellow)	0.03	0.89	17.93	82.25
Ruta Bagas	0.02	0.67	16.03	83.28
Turnips (white)	0.02	0.85	11.45	87.78

*Prof. Horsford made these analyses in the Laboratory of Baron Liebig.

Trees and Plants Incinerated.	Ashes.	Potassa.
100 Lbs. of Oak gave	2.50	0.153
Pine, (will thrive on sand, where little else grows)	0.83	0.045
Linden	5.00	
Rye	4.40	
Potato stalks	15.00	
Poplar wood		0.075
Beech wood	2.19	0.145
Willow		0.285
Elm and Maple	1.66	0.390
Wheat straw	1.98	0.390
Thistles		0.500
Flax stems		0.500
Small rushes		0.500
Vine shoots	1.62	1.550
Barley straw		0.580
Indian corn stalks	1.98	1.750
Bean stalks		2.000
Sun flower	7.48	2.000
Nettle		2.500
Thistle		3.527
Wormwood		7.000

ANALYSIS OF THE ASHES OF TREES — Continued.

	6				7			8			6	
	Swamp White Oak (Q. bi-color.)				White Elm (Ulmus Americana.)			Chestnut (Castanea vesca.)			Red Beech (Fagus Ferruginea.)	
	Bark.	Sap-wood	Heart wood.		Bark.	Sap wood	Wood of twigs.	Bark.	Sap-wood	Heart wood.	Bark.	Heart wood.
Phosphoric acid.....	0.29	---	---	---	0.14	12.02	3.98	0.31	0.50	---	---	---
Sulphuric acid.....	40.33	32.92	34.61	---	39.44	---	26.07	39.90	23.84	29.52	40.41	24.39
Carbonic acid.....	52.26	30.28	35.87	---	27.46	---	14.77	51.60	40.76	38.20	52.29	31.56
Lime.....	0.25	0.50	0.51	---	13.10	---	2.40	0.60	5.77	0.51	0.32	5.44
Magnesia.....	---	---	---	---	---	---	---	---	---	---	---	---
Peroxide of iron.....	0.46	20.49	14.79	---	3.79	---	9.61	1.36	4.56	2.73	0.13	12.13
Potassa.....	Trace.	3.15	3.69	---	1.65	---	18.41	0.32	1.41	1.98	---	15.53
Soda.....	2.00	1.50	0.50	---	1.75	---	0.50	1.20	1.43	1.71	---	25.53
Silica soluble.....	---	---	---	---	---	---	---	---	---	---	---	---
Silica insoluble.....	---	---	---	---	---	---	---	---	---	---	3.30	1.45
Chlorine.....	---	---	---	---	---	---	---	---	---	---	---	1.60
Chloride of sodium.....	---	---	---	---	---	---	---	---	---	---	---	---
Sodium.....	---	---	---	---	---	---	---	---	---	---	---	0.05
Phosphate of iron.....	3.50	5.20	60.30	---	3.40	---	22.35	0.20	1.30	0.30	1.96	17.33
Phosphate of lime.....	---	---	---	---	---	---	---	2.90	17.44	8.60	---	22.04
Phosphate of Magnesia.....	---	---	---	---	---	---	---	---	---	---	---	0.85
Sulphate of lime.....	---	---	---	---	---	---	---	---	---	---	---	0.93
Organic matter.....	2.13	---	2.70	---	2.00	---	---	5.00	1.74	8.90	---	1.88
Coal.....	2.50	---	1.60	---	---	---	0.30	1.00	0.91	1.76	1.50	---
Moisture.....	---	---	2.80	---	3.10	---	---	3.00	---	2.13	---	---

	Peach Tree.			Plum Tree.			Apple Tree.		
	Bark.	Sap-wood	Heart wood.	Bark of the root	Wood of the root.	Wood of the limbs.	Bark.	Sap-wood	Heart wood.
Sulphuric acid.....	4.19	-----	1.51	5.22	4.64	20.34	38.39	12.21	22.17
Carbonic acid.....	-----	-----	-----	-----	-----	-----	49.56	15.79	38.98
Lime.....	42.1	-----	23.28	22.74	0.17	10.42	1.86	15.56	2.66
Magnesia.....	2.16	-----	6.40	0.98	0.20	3.76	2.66	3.52	2.93
Peroxide of iron.....	-----	-----	-----	-----	-----	-----	-----	-----	-----
Potash.....	1.20	-----	7.11	9.86	40.41	11.68	0.44	3.99	2.75
Soda.....	-----	-----	11.15	6.63	-----	-----	1.53	3.33	1.62
Silica.....	4.15	-----	1.35	21.40	1.80	0.70	1.26	0.45	0.20
Chloride of sodium.....	0.04	-----	0.16	4.22	0.10	0.18	0.30	0.33	0.51
Sodium.....	-----	-----	-----	-----	-----	-----	-----	-----	-----
Phosphate of iron.....	0.45	-----	0.32	6.90	1.20	0.60	}	-----	-----
Phosphate of lime.....	18.79	-----	29.19	7.62	31.98	24.99		37.50	24.40
Phosphate of Magnesia.....	0.01	-----	1.34	3.28	17.12	1.16		-----	-----
Organic matter.....	3.30	-----	5.20	1.76	2.50	4.60	3.35	3.20	3.60
Coal.....	-----	-----	-----	3.60	0.90	1.80	1.26	0.35	0.01

ANALYSIS OF THE ASHES OF TREES — Continued.

	6			7			8			6		
	Swamp White Oak (Q. bi-color.)			White Elm (Ulmus Americana.)			Chestnut (Castanea vesca.)			Red Beech (Fagus Feruginea.)		
	Bark.	Sap-wood	Heart wood.	Bark.	Sap wood	Wood of twigs.	Bark.	Sap-wood	Heart wood.	Bark.	Sap wood	Heart wood.
Phosphoric acid.....	0.29	---	---	0.14	12.02	3.98	0.31	0.50	---	---	0.47	0.62
Sulphuric acid.....	40.33	32.92	34.61	39.44	---	26.07	39.90	23.84	29.52	40.41	24.39	24.59
Carbonic acid.....	52.26	30.28	35.87	27.46	---	14.77	51.60	40.76	38.20	52.29	31.56	31.82
Lime.....	0.25	0.50	0.51	13.10	---	2.40	0.60	5.77	0.51	0.32	5.44	1.44
Magnesia.....	---	---	---	---	---	---	---	---	---	---	---	---
Peroxide of iron.....	---	---	---	---	---	---	---	---	---	---	---	---
Potassa.....	0.46	20.49	14.79	3.79	---	9.61	1.36	4.56	2.73	0.13	12.13	4.04
Soda.....	Trace.	3.15	3.69	1.65	---	18.41	0.32	1.41	1.98	---	15.53	25.53
Silica soluble.....	2.00	1.50	0.50	---	---	0.50	1.20	1.43	1.71	---	---	---
Silica insoluble.....	---	---	---	1.75	---	---	---	---	---	3.30	1.45	1.60
Chlorine.....	---	---	---	---	---	---	---	---	---	---	---	---
Chloride of sodium.....	---	---	---	---	---	---	---	---	---	---	0.05	0.24
Sodium.....	---	---	---	---	---	---	---	---	---	---	---	---
Phosphate of iron.....	---	---	---	---	---	---	0.20	1.30	0.30	1.96	17.33	22.04
Phosphate of lime.....	3.50	5.20	60.30	3.40	---	22.35	2.90	17.44	8.60	---	0.85	0.40
Phosphate of Magnesia.....	---	---	---	---	---	---	---	---	---	---	0.93	0.02
Sulphate of lime.....	---	---	---	---	---	---	---	---	---	---	---	---
Organic matter.....	2.13	---	2.70	2.00	---	---	5.00	1.74	8.20	---	1.86	2.80
Coal.....	2.50	---	1.60	---	---	0.30	1.00	0.91	1.76	1.50	---	---
Moisture.....	---	---	2.60	3.10	---	---	3.00	---	2.13	---	---	---

	Peach Tree.			Plum Tree.			Apple Tree.		
	Bark.	Sap-wood	Heart wood.	Bark of the root	Wood of the root.	Wood of the limbs.	Bark.	Sap-wood	Heart wood.
Sulphuric acid.....	4.19	-----	1.51	5.22	4.64	20.34	38.39	12.21	22.17
Carbonic acid.....	-----	-----	-----	-----	-----	-----	49.56	15.79	38.98
Lime.....	42.1	-----	23.26	22.74	0.17	10.42	1.86	15.56	2.66
Magnesia.....	2.16	-----	6.40	0.98	0.20	3.76	2.56	3.52	2.93
Peroxide of iron.....	-----	-----	-----	-----	-----	-----	-----	-----	-----
Potassa.....	1.20	-----	7.11	9.86	40.41	11.68	0.44	3.29	2.75
Soda.....	-----	-----	11.15	6.63	-----	-----	1.53	3.33	1.62
Silica.....	4.15	-----	1.35	21.40	1.80	0.70	1.26	0.45	0.20
Chloride of sodium.....	0.04	-----	0.16	4.22	0.10	0.18	0.30	0.33	0.51
Sodium.....	-----	-----	-----	-----	-----	-----	-----	-----	-----
Phosphate of iron.....	0.45	-----	-0.32	6.90	1.20	0.60	-----	-----	-----
Phosphate of lime.....	18.79	-----	29.19	7.62	31.98	24.99	3.60	37.50	24.40
Phosphate of Magnesia.....	0.01	-----	1.34	3.28	17.12	1.16	-----	-----	-----
Organic matter.....	3.30	-----	5.20	1.76	2.50	4.60	3.35	3.20	3.60
Coal.....	-----	-----	-----	3.60	0.90	1.60	1.26	0.35	0.01

ANALYSIS of the ash of organic substances.

	MILK. Composition of the ash from 100 parts of milk.	
	ONE.	TWO.
Phosphate of lime.....	0.23	0.34
do Magnesia.....	0.05	0.07
Chloride of potassium.....	0.14	0.18
do Sodium.....	0.02	0.03
Free soda.....	0.04	0.05

The preceding tables, if studied carefully, show that there are decided differences in the composition of the ashes from different crops, and this shows us that some crops may grow and produce abundantly, while others would fail, or yield only a small crop.

It may also be seen, in the preceding tables, that all the grains, grasses, straw, roots, and tops of vegetables, contain phosphoric acid, sulphuric acid, lime, magnesia, potassa, soda, silica, chlorine, and oxide of iron, in variable proportions in the different kinds, and also different in the various parts of the same plants. The seeds which are most nutritive, contain much the largest portion of the phosphates, and other compounds best adapted to develop the animal frame in all its parts. The stems and straw contain much siliceous matter, where they are required to have strength, as in straw; others are rich in potash and soda, &c.

The bones of most animals are composed, principally of phosphate of lime, which is derived entirely from their food. All grains, and nearly all seeds and edible roots, contain some phosphates, which are necessary to their perfection; and unless they contained them, animals could have no bones, no solid attachments for their muscles, little strength, and generally little power of locomotion, and would not be adapted to the conditions necessary to secure their existence.

The phosphates of lime or magnesia, or some other substance, with which phosphoric acid could be united, must exist in every productive soil, else neither vegetation nor animal life could be sustained. The phosphate of lime is only one among many mineral bodies that must necessarily be contained in every productive soil. Lime or magnesia, potash or soda, siliceous matter in a soluble state, sulphur, chlorine and oxide of iron, are indispensable in every soil capable of producing food for man or beast. Most of the above mentioned bodies enter into the composition as a necessary constituent of every plant, and of almost every part of all animals.

Is it then to be regarded as singular, that soils, by long continued cultivation, become exhausted, so that crops of particular grains and plants can be no longer raised on them with profit?

The mineral matter in plants is small in amount, but its indispensable importance in the animal and vegetable economy, is manifest from what precedes.

(3D.) ON THE COMPOSITION OF SOILS.

It will be readily inferred, from a knowledge of the mineral elements of the ash of plants, that if a soil that is not too wet, and has a suitable texture, fails to produce remunerating crops with proper culture, there must be some element wanting in the soil that is necessary for that crop.

This may be ascertained by a careful chemical analysis; but as this costs from 10 to 25 or 50 dollars, and very few are qualified for making reliable analyses, few are made.

The substances most likely to be wanting in the soil, from exhausting cultivation, are phosphates, sulphates, alkalies, lime, magnesia, and chlorine and soluble silex.

A dressing of wood-ashes, a little salt and gypsum, and earth or yard manure, kept wetted with urine from the stables and house, will remedy all these defects. Manure from the barn-yard, or straw, or stalks, or a crop of clover or grass-sod, plowed in, will keep up the supply of organic matter in the soil. The urine of men and animal abounds in phosphates and nitrogenous compounds, and is a precious manure that is generally wasted.

The following tables illustrate the composition of various qualities of soil, and with a little study, the requisites of a good soil may be recognized.

ANALYSIS OF SOILS.

	1*	2*	3*	4*	5†	6†	7†
	Good wheat soil from Lotnians.	Do from the Carse of Gowrie.	Very poor wheat soil.	Good wheat soil from Perthshire.	Fertile without manure.	Fertile with ma- nure.	Very barren soil.
Silica	74.39	63.19	73.27	73.52	64.8	83.3	74.86
Peroxide iron	4.72	4.87	8.15	4.32	6.1	3.0	8.1
Alumina ..	5.54	14.04	5.41	7.36	5.7	5.1	9.1
Lime	1.39	0.83	1.72	2.71	5.9	1.8	0.4
Magnesia	0.75	1.02	0.62	1.63	0.8	0.8	0.1
Potash	1.71	2.80	0.13	0.55	0.2	trace.	trace.
Soda	0.68	1.44	0.12	0.36	0.4	do	do
Sulphuric acid	0.10	0.09	----	0.05	0.2	0.1	do
Phosphoric acid	0.15	0.24	trace.	0.22	0.4	0.2	do
Chlorine	0.01	0.01	do	0.06	0.2	----	do
Organic matter	6.33	8.55	8.00	6.67	9.7	5.0	4.0
Water	4.43	2.70	2.39	2.50	----	----	----
Ox manganese	----	----	----	----	0.1	0.3	trace.
Carbonic acid	----	----	----	----	4.0	0.6	do

* Vide Prof. Norton's Address, N. Y. S. Ag., Trans., 1850, p. 592. Comments on these analysis, 593-4, and on No. 3, on p. 595-6.

† Vide Prof. Norton's Address, N. Y. S. Ag., Trans., 1847, p. 65.

The soils numbered 3 and 6 are poor soils, that require special manuring to bring them into a productive condition. No. 7 is a very barren soil, and it may be seen that most of these elements that are usually in small proportion in the soil, are either wanting, or in too small quantities to supply the necessities of plants.

**ANALYSIS OF FRESH WATER MARLS—SENECA COUNTY, N. Y.;
SIMILAR TO THOSE OF OHIO.**

	1	2	3	4	5	6	7 •
Moisture.....	4.50	2.50	1.00	2.71	3.48	9.96	8.57
Organic matter.....	8.50	0.90	4.20	4.32	1.65	2.12	3.10
Insoluble sand.....	6.60	11.70	6.00	5.58	5.00	13.00	26.65
Carbonate of lime.....	77.10	79.40	83.33	82.98	83.35	67.30	56.80
Magnesia.....	2.10	3.50	2.16	3.60	4.00	3.00	1.60
Phosphoric acid.....	}	1.20	2.80	0.81	{	0.86	0.61
Alumina.....						2.00	3.50
Common salt.....					0.20	0.13	0.14
Sulphate of lime.....			0.50				
Sulphuric acid.....					0.46	0.38	0.27

The results of these analyses show that these marls are valuable fertilizers. They are all of them rich in lime and magnesia. They all contain phosphoric acid, and some of them other substances necessary for vegetation. Marls like these occur abundantly in Ohio, and although they have been little used as yet, they are in reserve for the future benefit of soils in Ohio. Such marls have long been profitably applied on the lands along the Hudson River, in Orange, Dutchess, Columbia, and other counties in New York.

ANALYSIS OF THE SOILS OF PIKE COUNTY.

	Rolling upland, yellow clay loam soil, 40 years cleared, cultivated or pastured, 6 m. S. S. E. of Pike-ton. Subja-cent rock, Waverly sand-stone	Best bottom land, 18 years consecutively in corn. Alluvial soil, yields now, with ordinary culture, 80 bushels of corn to an acre.	Light sandy loam sub-soil, emerges in small spots on the Fee bottom, alluvial—very poor.	Best bottom land, dark clay loam, 42 years in corn, and in grass. Alluvial.	Best bottom land, 46 years in corn, 2 years in wheat, 8 years in grass, yields 80 bushels corn per acre with ordinary culture. Alluvial.	Black sandy soil from near No. 5—never cultivated—now in grass in sugar tree grove. Alluvial—never overflowed since whites have occupied the country.
Hygrometric Water-----	0.91	2.29	0.46	0.30	1.72	1.16
Organic Matter.	0.91	2.29	0.46	0.30	1.72	1.16
	0.74	0.002	0.005	0.013	0.032	0.024
	---	0.002	---	0.008	0.004	0.009
	0.08	0.021	0.005	0.010	0.010	0.005
	2.00	1.84	0.420	2.32	3.14	2.63
Insoluble -----	0.14	4.36	0.050	1.62	1.03	0.61
	0.47	4.14	0.50	1.44	1.72	1.60
	---	10.37	---	---	---	---
Combined } with iron and al.. }		3.43	0.975	5.411	5.936	4.878
Alkalies & chlorides		0.44	0.444	0.25	0.86	0.55
Solution in water		0.035	0.007	0.030	0.032	0.024
Pot. and soda.---		not det.	traces.	traces.	---	---
Sol. in hyd. acid.---		0.035	traces.	traces.	0.161	Not determined.

Silica ---- { S. with lime & iron Solution in water -- Sol. soluble by acid	0.015	0.065	traces.	0.012	0.012	0.005
	0.334 0.349	0.640 0.705	0.20 0.200	0.27 0.282	0.56 0.572	0.328 0.333
Per ox. iron, alumina & mang.	4.254	1.995	2.000	1.240	2.760	1.629
Phosphoric acid-----	0.033	0.041	traces.	traces.	0.041	traces.
Lime -----	0.100	1.026	2.550	0.400	0.390	0.231
Magnesia -----	traces.	0.236	1.280	0.017	0.280	0.102
Insoluble silicates. { Sand----- Clay-----	37 } 88.949 63 }	45 } 78.842 55 }	90.270	88.453	59 } 83.010 41 }	88.520 70 { 88.520 30 }
Loss*-----						

* Magnesia, alkalies in acid extract, not detailed, are included in this loss.

THE RESULTS of the preceding table may be more concisely stated and perhaps more profitably for general use as below.

	Roosting up land. yellow loam soil.	Best bottom land, 18 years in corn.	Light sandy sub- soil, poor alluvial.	Best bottom, dark clay loam, 42 years in cultivation.	Best bottom land 51 years in culti- vation.	Black sandy loam of bottom, never cultivated, near No. 5.	These substances were all dissolved in alcohol, ether, water, dilute muri- atic acid, in ammonia and soda, and are available for growing plants.
Hygrometric water.....	0.910	2.290	0.460	0.300	01.720	1.160	
Organic matter.....	3.770	11.374	1.419	5.661	6.796	5.428	
Alkalies, chlorides & sulphates ..	0.035	0.207	traces.	traces.	0.161	not det.	
Silica soluble.....	*0.349	0.705	0.200	0.282	0.572	0.633	
Perox-iron, alumina and mang.....	4.254	1.995	2.000	1.240	2.760	1.629	
Phosphoric acid.....	0.033	0.041	traces.	traces.	0.041	traces.	
Lime.....	0.100	1.026	2.550	0.400	0.390	0.281	
Magnesia.....	traces.	0.236	1.280	0.017	0.028	0.102	
Insoluble silicates { Sand.....	*32.91	35.478	} 90.270	88.430	{ 48.976	61 964	
Clay.....	54.03	43.363				26.556	

*The potassa and soda soluble in hydrochloric acid and magnesia, were not determined.

The analysis of soils, as ordinarily stated, I do not deem of much value to the farmer, so far as his growing crops are concerned. They show the ultimate elements of the soil, and what they may yield to crops in the course of ages of cropping, and fallowing, and "turning out," as it is called, to the spontaneous growth of vegetation.

The farmer wants to know what materials are immediately available in the soil, to supply the wants of such plants as he wishes to cultivate, in such a state that plants can absorb and assimilate them, to fulfil the purposes for which they are necessary in the vegetable structure. He cares little what is held in reserve in states of chemical combination in the minerals of the soil, if it is to be liberated only after long ages of time shall have rolled away, and not be available for him or his descendants for many generations. If his soil lacks any necessary element, in a condition to be immediately available for plants, he wishes to know this, and the mode of analysis thus far pursued, is calculated to fulfil this end, and also to show what will be available in a short course of years.

Many scientific men, who have given attention to the analysis of soils, concur in insisting on the distinction between the DORMANT and ACTIVE components of the soil, with reference to the plants that grow upon it.

It seems desirable in soils to ascertain three points :

1st. What is the amount of each of the materials required for plants and capable now of being assimilated by them ?

2d. What is the amount of these materials that can be relied on for a term of years, and that will be available as they may be wanted by plants ?

3d. What is the amount of these materials, that will in the course of *ages* be capable of being assimilated, and their relative amounts in the soil ?

The two first are important to the farmer, and represent the active and dormant components of the soil available for vegetation, and these are exhibited in the last table, where the results of the analyses of the soils of Pike county are condensed into a convenient and available form. The latter, although of interest to the man of science, and the statesman, is of speculative interest only, so far as the present is concerned.

Although the soils of Ohio are rich and productive, yet, those long cultivated under an exhausting system of tillage, are already found to produce less abundantly than formerly, and it becomes important, not only to the owner and farmer, but also to the far-seeing statesman, that our soils that are impoverished should be improved and made more productive. The State and National wealth and power are greatly, in fact, primarily, dependent on the productive returns for labor on the soil. It is important, therefore, that the relative amount of production to labor, should not diminish, and the analysis of soils and their organic products seem to be the most ready means of attaining this result.

MECHANICAL TEXTURE OF SOILS.

The texture of a soil is of more importance than is commonly supposed. The texture must be such as to retain a suitable quantity of moisture for the nour-

ishment of vegetation, and be neither so clayey as to bake and crack in the heat of the sun, or heave by the action of frost; nor so sandy as to become parched, and be mere dust, at the depth to which the roots of plants penetrate.

Argillaceous soils have so strong an affinity for water as to retain a small portion even when heated. There should be a sufficient quantity of clay in soils to enable them to retain three or four per cent. of water when dry, and to convert the other materials into a loam.

SUBSOIL.

It is necessary, also, to consider the subsoil, in judging of the productiveness of any soil. If the subsoil be impervious to water, the soil, unless it be drained, will be cold and wet, and however abundantly it may be supplied with the mineral or organic elements of fertility, it will be comparatively barren.

A cold wet soil may be improved by some of the numerous modes of taking off water, viz: by ridging the land when plowed, ditching, draining, under-draining, subsoil plowing, or in some cases by sinking pits, or by boring through their clay beds, to gravel and sand-beds below, if the geological structure indicates alternations of such materials.

However poor a soil may be, it can always be improved by art—if too clayey, sand will be a benefit—if too sandy, clay will be useful as a dressing—if too wet, drainage will improve it—if it lacks organic matter, manure from the barnyard, privy, pig-sty, scrapings of the streets, wash of the roads, &c., will make it more fertile: but, unfortunately, in many parts of our country, particularly in Ohio, the value of produce and the cost of labor will not always justify the expenses of such improvement.

The chemical composition as well as mechanical texture of soils, exerts a powerful influence over vegetation. Many soils in Ohio contain pebbles and gravel of calcarous and other rocks, which are continually undergoing disintegration and solution by atmospheric agents, and thus serve as permanent mineral manures.

Of mineral and organic manures in Ohio, we know little as yet. Marl, such as occurs under the peat marshes in central and northern Ohio, is abundant; and peat is still more abundant; and both of these will, doubtless, be extensively used in Ohio, in succeeding generations, and by some of the more enterprising farmers of our own day. Gypsum is also in considerable quantity near Sandusky. If there are beds of other materials calculated to renovate worn soils, they have not yet been made known. This can only be ascertained by a careful geological examination of the State, and an analysis of the soils and rocks of Ohio.

This essay does not occupy all the ground that was intended, inasmuch as it has been done after my family had retired to rest, and were asleep, and the time during which I was engaged in its preparation was too short to permit more, before the meeting of the Board on the 3d of December, at which time the Essays on the Soils of Ohio are required to be presented to the Board. Many of the tables, also, are less complete than if more works that contain analyses had been consulted.

W. W. MATHER.

VI.

LIST OF AGRICULTURAL SOCIETIES IN OHIO, 1851.

COUNTIES.	PRESIDENTS.	CORRESPONDING SEC'YS.
Allen	Matthew Dobbins.	Hugh Dobbins.
Ashtabula	Hon. Chester Stone.	N. E. French.
Athens	S. Rice.	A. B. Walker.
Ashland	Joseph Workman.	John Scott, Jr.
Belmont	Charles Hoover.	J. McGregor Kerr.
Brown	H. L. Penn.	R. Shepherd.
Butler	F. Anderson,	John M. Milliken.
Carroll	Charles Fawcett.	Geo. F. Kennedy.
Champaign	Wm. Vance.	J. H. Young.
Clark and Madison	A. Waddle.	Wm. Whiteley.
Clermont	S. R. S. West.	John Hancock.
Clinton	Isaac Haslett.	Jos. Wood.
Columbiana	John Ferrall.	Leonard Hanna.
Coshocton	C. F. Sangsten.	Thomas Campbell.
Crawford	R. W. Musgrave.	A. Failor.
Cuyahoga	B. Stedman.	A. A. Jewett.
Delaware	N. Dustin.	L. Glessner.
Defiance	Wm. D. Haymaker.	Wm. C. Holgate.
Fairfield	D. Talmadge.	John M. Bigelow.
Fayette	Daniel McLean.	S. F. Kerr.
Franklin	S. Medary.	W. Dennison.
Gallia	Jehu McDaniel.	
Geauga	Hester Taylor.	L. J. Rider.
Greene	Walter Parry.	John Boyd.
Guernsey	Gordon Lofland.	C. J. Albright.
Hamilton		
Hancock		
Hardin	John Hinkle.	J. K. Goodwin.
Harrison	John Haverfield.	E. Cattell.
Highland	W. H. Trimble.	J. Dill.
Holmes	J. R. Buckminster.	Alfred H. Smith.
Huron and Erie	Philo Adams.	Luke S. Stow.
Jackson	S. Carrick.	R. C. Hoffman.
Jefferson	George McCulloch.	A. J. McGrew.
Knox	Wm. Bevans.	E. Allaig.
Lake	C. B. Smith.	George Everett.
Licking	P. N. O'Bannon.	George F. Moore.
Logan	L. Smith.	N. R. Usher.
Lorain	B. C. Perkins.	E. Matcham.
Lucas	E. Bissell.	H. Bennett.

LIST—*Continued.*

COUNTIES.	PRESIDENTS.	CORRESPONDING SEC'YS.
Mahoning	A. Baldwin.	S. C. Clark.
Marion	J. S. Copeland.	Nathan Peters.
Medina	J. S. Pritchard.	Herman Canfield.
Meigs	Stephen Titus.	Samuel Halliday.
Miami	A. Coleman.	M. M. Maunson.
Monroe	Joseph Morris.	James R. Morris.
Montgomery	H. Protsman.	R. W. Steele.
Muskingum	C. Springer.	J. Bernard.
Ottawa		
Perry	A. Johnson.	W. J. Clarke.
Pickaway	T. Houston.	P. K. Hull.
Pike	J. I. Vanmetre.	O. J. Phelps.
Portage	D. McIntosh.	Wm. Coalman.
Preble	E. Taylor.	D. Lesh.
Richland	Mordecai Bartley.	W. Lyne.
Ross	James Vause.	R. H. Lansing.
Scioto	Lemuel Moss.	Wm. B. Russell.
Seneca	Lewis Baltzell.	George Sprague.
Shelby	Irwin Nutt.	J. B. Haggett.
Stark	J. S. Kelley.	M. Reynolds.
Summit	Amos Spicer.	N. H. Goodhue.
Trumbull	H. Austin.	Junius Dana.
Tuscarawas	E. James.	John English.
Union	Joshua Judy.	John Johnson.
Vinton	James Kaler.	E. F. Bingham.
Warren	Ezra Carpenter.	J. P. Gilchrist.
Washington	Seth Woodford.	W. S. Ward.
Wayne	Thomas Reed.	J. Johnson.
Wood	Elijah Elliott.	Henry Wood.

LIST OF LETTERS sent to the Presidents of County Agricultural Societies, containing their certificates to draw funds from the county Treasury, under section three of the act for the Encouragement of Agriculture, for the year 1851.

COUNTIES.	PRESIDENTS.	P. O. ADDRESS.
Belmont.....	C. Hoover, pr. J. McG. Kerr,	St. Clairsville.
Hardin.....	John Hinkle,	Roundhead.
Harrison.....	John Haverfield	Cadiz.
Highland.....	W. H. Trimble.....	Hillsborough.
Holmes.....	J. R. Buckminster.....	Millersburg.
Huron and Erie.....	Philo Adams.....	Huron.
Jefferson.....	George McCulloch.....	Waitersville.
Knox.....	Wm. Bevans.....	Mt. Vernon.
Lake.....	C. B. Smith.....	Painesville.
Licking.....	P. N. O'Bannon.....	Utica P O.
Logan.....	Luther Smith.....	West Liberty.
Lorain.....	B. C. Perkins.....	Rochester Depot.
Mahoning.....	A. Baldwin.....	Boardman.
Marion.....	J. S. Copeland.....	Marion.
Medina.....	J. S. Pritchard.....	Brunswick.
Meigs.....	Stephen Titus.....	Pomeroy.
Miami.....	Asa Coleman.....	Troy.
Monroe.....	Joseph Morris.....	Woodsfield.
Muskingum.....	Rev. C. Springer.....	Meadow Farm.
Perry.....	Aaron Johnson.....	Somerset.
Pickaway.....	Thomas Huston.....	Circleville.
Pike.....	John I. Vanmetre.....	Piketon.
Portage.....	David McIntosh.....	Shalersville.
Preble.....	Enoch Taylor.....	Eaton.
Richland.....	Mordecai Bartley.....	Mansfield.
Ross.....	James Vause.....	Chillicothe.
Scioto.....	Lemuel Moss.....	Portsmouth.
Seneca.....	Lewis Baltzell.....	Tiffin.
Shelby.....	Irwin Nutt.....	Sidney.
Stark.....	James S. Kelly.....	Massillon.
Summit.....	Amos Spicer.....	Akron.
Trumbull.....	Harmon Austin.....	Warren.
Tuscarawas.....	Elisha James.....	N. Philadelphia.
Union.....	Joshua Judy.....	Marysville.
Vinton.....	Joseph Kaler.....	McArthur.
Warren.....	Ezra Carpenter.....	Clarksville.
Washington.....	D. Woodford.....	Watertown.
Wayne.....	Thomas Reed.....	Dalton.
Wood.....	Elijah Elliott.....	Perrysburg.

TABULAR STATEMENT of the number and value of Domestic animals returned for Taxation by the Township Assessors, and equalized by the County Boards, for the year 1851.

COUNTIES.	HORSES.		MULS.		CATTLE.		SHEEP.		HOGS.	
	No.	Value.	No.	Value.	No.	Value.	No.	Value.	No.	Value.
Adams	5,760	\$198,999	5	\$190	8,906	\$77,181	18,397	\$9,908	20,650	\$32,247
Allen	3,618	123,300	---	---	7,102	55,540	12,114	6,838	13,162	11,184
Ashland	7,429	283,825	3	150	14,672	115,103	79,837	\$9,384	19,563	22,263
Ashtabula	5,701	211,082	24	668	33,803	372,735	35,242	17,724	5,129	9,155
Athens	3,862	131,823	---	---	9,581	89,357	34,424	17,580	10,663	16,632
Angelaize	3,266	104,048	18	900	6,440	49,571	8,463	4,728	10,414	9,952
Belmont	9,687	423,486	25	1,065	15,287	143,881	65,810	39,626	22,537	37,935
Brown	7,653	287,318	35	1,345	10,406	90,948	16,922	8,852	30,823	60,256
Butler	10,175	430,767	22	1,048	13,044	122,718	9,515	6,053	41,515	83,720
Carroll	5,649	229,823	11	343	10,682	84,242	77,841	39,239	12,405	12,424
Champaign	7,180	290,620	67	3,630	12,517	134,221	44,262	29,893	17,243	29,130
Clark	6,523	264,224	99	5,530	11,943	135,613	47,415	32,422	17,967	33,856
Clermont	7,969	326,206	54	2,273	11,127	109,490	15,645	9,143	38,477	77,594
Clinton	6,586	261,206	112	4,546	11,905	127,443	47,981	35,933	29,146	59,039
Columbiana	8,659	330,309	20	769	16,209	146,581	101,730	59,434	14,413	21,664
Coshocton	7,777	308,216	7	235	16,045	128,715	61,924	35,113	21,539	27,630
Crawford	5,652	234,717	---	---	14,069	136,276	68,878	43,904	18,386	25,014
Cuyahoga	7,089	288,345	1	40	18,922	233,483	59,056	32,105	8,400	15,619
Darke	6,621	234,370	3	80	10,641	92,194	19,321	9,496	23,246	25,710
Defiance	1,480	53,255	3	50	4,650	47,189	3,002	2,393	6,090	5,547
Delaware	7,134	287,643	17	2,150	13,570	137,801	51,007	35,367	18,192	32,486
Erie	4,008	178,499	---	---	9,592	112,981	57,089	30,650	7,812	12,601
Fairfield	9,357	368,802	39	1,345	17,566	147,016	43,011	22,438	26,891	41,054
Fayette	5,363	222,087	124	6,665	15,409	239,005	38,260	28,592	23,604	55,508

Franklin	9,848	400,581	161	9,078	14,849	178,804	26,811	17,379	35,722	68,697
Fulton	1,553	50,925	1	25	7,111	66,732	10,000	5,799	5,838	4,398
Gall'a	3,844	130,183	32	1,391	7,529	66,429	17,237	9,111	8,424	10,913
Geauga	4,493	173,977	12	320	23,608	280,277	47,830	25,591	4,328	8,041
Green	7,347	314,921	49	2,190	12,146	126,553	36,661	21,897	26,907	58,639
Guernsey	8,101	288,875	69	3,380	14,163	100,306	66,136	34,827	18,311	21,413
Hamilton	11,974	507,281	25	1,345	12,720	138,415	4,772	4,769	25,717	56,466
Hancock	5,160	186,375	1	25	9,887	81,272	2,117	10,476	17,795	16,038
Hardin	2,480	82,580	3	135	4,538	41,664	7,072	3,745	10,163	10,163
Harrison	6,034	270,396	20	930	10,638	100,029	112,103	67,545	14,733	22,206
Henry	640	20,853	5	100	2,210	23,272	1,033	743	2,777	2,525
Highland	8,743	325,397	77	3,910	13,393	122,204	27,925	14,717	35,589	67,777
Hocking	3,787	130,145	8	260	7,080	52,294	17,560	8,258	5,508	12,217
Holmes	6,529	244,632	13	305	13,188	91,755	50,983	25,406	17,786	16,062
Huron	7,306	306,122	10	795	19,282	213,592	82,741	42,054	14,389	25,473
Jackson	3,529	101,765	10	795	9,092	72,262	16,154	7,954	9,205	9,797
Jefferson	6,332	271,890	3	135	11,241	96,024	104,653	62,754	14,743	21,217
Knox	8,272	301,911	2	66	14,949	119,709	89,711	46,203	19,236	27,015
Lake	3,318	132,244	3	95	10,379	120,937	29,130	16,356	2,922	5,363
Lawrence	2,619	90,125	67	3,130	5,429	76,251	6,710	3,748	9,134	11,342
Licking	12,188	480,831	13	440	21,932	220,162	125,825	89,796	22,112	35,112
Logan	6,630	246,976	24	1,510	10,746	98,948	31,249	16,673	15,451	19,215
Lorain	6,519	257,191	19	405	23,132	268,387	80,880	41,549	9,950	15,346
Lucas	1,910	71,052	2	60	5,076	65,763	8,922	6,889	5,044	6,778
Madison	4,324	185,093	247	12,690	15,142	238,503	51,318	39,958	15,880	31,907
Mahoning	7,000	278,694	16	860	17,149	182,915	84,015	42,886	11,003	16,017
Marion	5,183	209,665	4	90	11,429	123,235	70,907	47,099	17,216	26,718
Medina	6,171	246,126	2	60	19,833	212,835	101,859	52,530	9,803	17,116
Meigs	2,893	99,346	16	751	7,573	72,675	18,591	9,698	7,219	10,523
Mercer	2,560	82,666	7	205	5,024	37,674	5,702	3,459	10,156	7,657
Miami	7,417	292,524	5	510	10,919	90,833	22,722	11,976	21,510	33,175
Monroe	4,731	165,091	17	485	8,916	71,392	19,852	9,696	12,495	14,965
Montgomery	10,057	428,768	5	243	13,893	115,089	18,554	9,309	31,921	55,845

TABULAR STATEMENT — Continued.

COUNTIES.	HORSES.		MULES.		CATTLE.		SHEEP.		HOGS.	
	No.	Value.	No.	Value.	No.	Value.	No.	Value.	No.	Value.
Morgan	5,538	\$241,088	9	\$420	10,029	\$84,331	36,604	\$19,073	12,521	\$18,209
Morrow	6,630	228,390	2	45	13,059	109,394	65,849	36,721	13,964	21,346
Muskingum	11,725	489,831	37	1,457	21,640	207,170	78,051	43,268	27,439	43,935
Noble	5,029	175,519	1	40	8,504	62,226	28,907	14,284	12,793	15,324
Ottawa	1,012	36,611	1	25	3,520	31,566	10,302	6,048	4,435	3,747
Paulding	438	15,237	—	—	1,290	13,074	460	442	2,254	2,306
Perry	6,547	234,539	7	1,357	11,898	92,347	44,448	25,075	15,804	22,568
Pickaway	7,954	345,904	28	1,535	27,207	487,361	25,236	14,436	38,674	87,798
Pike	3,254	128,222	10	265	5,478	61,181	9,673	5,303	14,514	30,097
Portage	6,085	261,868	9	405	27,576	334,378	90,249	46,373	7,610	12,502
Preble	8,017	336,641	2	200	11,114	95,785	21,793	11,107	31,799	52,272
Putnam	2,101	68,077	—	—	4,819	35,314	6,436	4,334	8,594	6,741
Richland	8,503	325,995	14	575	17,742	142,457	72,764	38,958	23,102	27,103
Ross	9,729	414,018	157	7,933	22,477	383,646	23,617	13,148	46,018	104,779
Sandusky	4,144	155,651	—	—	10,126	98,648	28,059	14,160	14,684	12,442
Scioto	3,705	132,133	74	3,870	6,765	79,565	9,152	5,322	10,633	14,814
Seneca	7,834	313,333	—	—	15,820	138,889	69,972	37,231	21,896	24,764
Shelby	4,484	155,688	38	2,095	7,854	56,035	14,952	7,522	12,100	12,815
Stark	11,090	452,877	6	742	21,786	195,236	90,937	54,417	25,948	35,460
Summit	6,193	266,761	1	35	19,041	219,341	79,878	44,030	10,782	17,923
Trumbull	7,310	306,653	41	1,928	35,233	439,758	60,387	31,932	8,374	13,777
Tuscarawas	8,388	353,039	15	550	18,205	141,189	76,129	43,466	21,358	22,421
Union	4,337	151,107	33	1,966	9,707	104,148	23,605	15,012	14,195	23,025
Van Wert	1,203	36,266	2	70	3,407	27,628	2,842	1,913	6,201	5,567
Vinton	2,433	85,094	2	140	6,241	56,388	14,155	6,541	6,203	9,321

Warren -----	8,313	319,350	9	380	12,340	115,825	21,658	14,843	28,305	19,354
Washington -----	5,316	186,438	-----	-----	12,121	127,999	38,394	21,292	11,268	16,130
Wayne - - - - -	10,531	394,292	11	470	20,778	149,880	87,317	44,519	24,794	27,803
Williams -----	1,496	53,606	-----	-----	5,858	56,334	5,402	3,820	6,456	5,603
Wood -----	2,348	74,335	-----	-----	7,038	61,868	8,048	4,340	8,759	6,083
Wyandot -----	3,461	131,818	6	270	9,185	97,554	41,573	23,747	12,840	15,846
Totals -----	517,396	20,337,442	2,238	\$105,968	1,116,145	\$11,382,950	3,619,674	\$2,060,012	1,456,643	\$2,297,229

Total value of Domestic Animals ----- \$36,183,601

TABULAR STATEMENT of the number of acres cultivated in Wheat and in Corn, and the number of bushels of each produced in the several Counties of the State of Ohio, in the year 1850.

COUNTIES.	WHEAT.		CORN.	
	Acres.	Bushels.	Acres.	Bushels.
Adams				
Allen	14,872	231,277	10,272	330,811
Ashland	32,382	633,996	14,708	560,512
Ashtabula				
Athens	17,468	221,369	19,323	683,341
Auglaize	9,721	139,788	9,503	280,217
Belmont	39,189	667,311	26,669	991,215
Brown	37,536	1,314,741	24,980	360,093
Butler	31,131	529,390	62,031	2,646,353
Carroll	34,915	577,235	10,107	316,999
Champaign	34,542	665,873	27,680	954,609
Clark	24,488	491,954	24,591	799,489
Clermont				
Clinton	17,626	288,995	33,116	1,313,375
Columbiana	35,721	606,261	14,457	516,821
Coshocton	47,811	862,809	25,882	962,636
Crawford	21,599	409,643	15,907	489,151
Cuyahoga	6,711	97,966	12,018	396,922
Darke				
Defiance	6,533	94,207	4,175	136,983
Delaware				
Erie	12,578	297,587	14,569	615,122
Fairfield	39,472	690,089	41,130	1,569,313
Fayette	9,901	149,564	32,080	1,331,927
Franklin	16,071	294,162	51,842	1,974,929
Fulton	8,117	127,705	5,309	170,680
Gallia	13,986	125,433	19,363	673,655
Geauga	4,336	59,528	8,579	310,583
Greene	28,550	576,258	33,177	1,170,543
Guernsey	35,302	564,787	25,056	851,181
Hamilton				
Hancock	23,451	355,051	16,138	533,249
Hardin	6,024	88,469	6,989	199,300
Harrison	31,415	532,778	16,166	609,010
Henry				
Highland	38,394	495,392	48,615	1,604,618
Hocking	17,939	220,437	14,319	461,313
Holmes	33,704	640,459	11,481	389,553
Huron	21,882	441,604	22,806	878,143
Jackson	10,423	94,861	15,680	439,850
Jefferson	35,062	616,180	14,923	568,782
Knox	39,936	762,267	22,111	762,906
Lake	5,183	82,286	7,403	287,750
Lawrence	2,959	25,959	16,110	532,571

STATEMENT — *Continued.*

COUNTIES.	WHEAT.		CORN.	
	Acres.	Bushels.	Acres.	Bushels.
Licking	48,187	849,116	38,241	1,527,734
Logan	16,926	734,376	39,525	795,542
Lorain	11,555	206,301	12,925	446,224
Lucas				
Madison	4,019	64,610	19,278	610,930
Mahoning	16,731	325,497	11,902	412,810
Marion	22,254	791,584	8,294	144,832
Medina	17,698	350,303	12,646	416,063
Meigs		128,593		264,841
Mercer	8,272	120,099	8,395	214,838
Miami	26,563	566,565	31,891	1,183,335
Monroe	24,131	301,219	23,375	728,242
Montgomery	36,094	788,784	36,454	1,359,179
Morgan	42,678	661,104	24,032	834,998
Morrow	19,389	364,432	16,164	583,318
Muskingum	58,649	1,003,096	32,079	1,249,456
Noble				
Ottawa	3,309	65,411	2,483	76,764
Paulding	1,389	19,588	1,532	59,054
Perry	34,766	537,900	21,267	752,982
Pickaway	20,152	338,829	65,860	2,627,727
Pike	6,001	52,596	22,957	902,611
Portage	14,664	255,402	10,426	329,539
Preble	28,172	471,605	34,927	1,167,548
Putnam	7,432	96,368	6,354	210,002
Richland	41,219	795,213	16,300	563,320
Ross	25,832	359,046	69,520	2,918,958
Sandusky	17,193	330,344	10,661	339,531
Scioto				
Seneca	40,895	836,824	17,940	649,923
Shelby	13,960	239,820	15,974	521,792
Stark	53,407	1,071,177	18,245	651,328
Summit	23,728	485,504	10,256	366,446
Trumbull	10,718	190,017	11,595	413,598
Tuscarawas	49,077	883,071	19,003	669,008
Union	5,836	103,302	16,413	525,732
Vanwert	4,481	60,604	3,436	92,544
Vinton	8,287	77,244	11,013	345,470
Warren	25,990	447,042	42,322	1,757,409
Washington	21,236	264,316	20,017	684,184
Wayne				
Williams				
Wood				
Wyandot				
Totals	1,658,106	30,309,373	1,537,947	55,079,374

**PRINCIPAL AGRICULTURAL PRODUCTIONS OF THE U. S., THAT
ARE IMPORTANT CROPS IN OHIO.**

State.	Bushels, wheat.	Bushels of Indian corn.	Wool, lbs. of.	Butter, lbs. of.	Cheese, lbs. of.	Hay, tons of.
Maine.....	367,980	1,741,715	1,366,866	8,488,234	2,201,105	794,760
New Hampshire ...	125,658	1,573,670	1,108,476	6,977,056	3,196,563	598,854
Vermont.....	493,666	1,625,776	3,492,087	12,128,095	6,755,006	763,579
Massachusetts.....	29,784	2,326,167	576,736	7,825,337	7,124,461	645,749
Rhode Island.....	39	516,133	111,937	1,066,825	296,748	73,353
Connecticut.....	40,167	1,996,462	512,529	6,620,579	4,512,019	499,706
New York.....	13,073,357	17,844,808	10,021,507	82,043,823	49,785,905	3,714,734
New Jersey.....	1,508,216	8,605,396	375,932	9,070,710	500,819	429,119
Pennsylvania.....	15,482,191	19,707,702	4,784,367	40,554,741	2,395,279	1,826,265
Delaware.....	466,784	2,888,896	52,887	1,034,867	3,187	30,159
Maryland.....	4,494,680	11,104,631	477,438	3,206,160	3,925	145,070
District of Columbia	17,370	65,280		14,809		1,974
Virginia.....	14,516,950	35,538,562	2,850,909	11,126,579	434,850	370,177
North Carolina....	2,147,899	28,286,999	915,289	4,144,258	95,043	145,180
South Carolina....	1,006,278	16,272,308	487,243	2,979,975	4,810	25,437
Georgia.....	1,085,784	30,428,540	988,802	4,640,074	40,391	23,427
Florida.....	1,225	1,993,462	23,235	375,853	18,324	2,620
Alabama.....	292,429	28,485,966	637,829	3,961,592	3,424	31,801
Mississippi.....	215,181	21,836,151	556,057	4,388,112	20,314	12,517
Louisiana.....	84	10,915,051	105,393	685,136	1,148	20,672
Texas.....	42,448	5,796,735	122,118	2,319,574	92,018	8,327
Arkansas.....	193,902	8,857,296	181,427	1,854,104	28,440	3,924
Tennessee.....	1,638,470	52,137,863	1,340,833	8,130,686	179,577	72,943
Kentucky.....	2,184,763	58,922,788	2,246,188	10,115,268	228,744	115,296
Ohio*.....	14,967, 56	59,788,750	10,089,607	34,180,458	21,350,478	1,360,636
Michigan.....	4,918,706	5,620,215	2,047,364	7,043,794	1,012,551	391,717
Indiana.....	6,625,474	52,887,564	2,502,753	12,748,186	666,986	402,791
Illinois.....	9,433,966	57,179,283	2,129,139	12,605,554	1,283,758	586,011
Missouri.....	2,943,840	35,709,042	1,635,182	7,762,124	201,597	116,294
Iowa.....	1,442,074	8,475,027	363,398	1,933,128	193,444	84,598
Wisconsin.....	4,292,208	1,883,370	243,065	888,816	440,961	295,927
California.....	98,282	90,082	4,800	705	150	2,038
Minnesota.....	3,422	16,665	260	1,101		2,069
Oregon.....	228,882	2,928	29,496	211,734	36,030	373
Utah.....	103,441	9,144	8,890	74,064	32,646	4,288
New Mexico.....	196,575	355,795	32,641	101	5,887	
Total.....	104,799,230	591,586,053	52,422,797	312,202,286	103,184,585	13,605,384

* The crop of 1849 was not half the usual crop, being mostly destroyed by the rust, and hundreds of fields in some of the counties were not harvested at all. The Assessors' returns for 1850, from 77 counties in Ohio, show the crop of that year more than 30,000,000 bushels, and from all the counties would give about 35,000,000.

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VII.

REPORTS

OF THE

COUNTY AGRICULTURAL SOCIETIES.

ALLEN COUNTY.

ALLEN COUNTY AGRICULTURAL SOCIETY.

To the State Board of Agriculture :

In pursuance of previous notice, a meeting of citizens of Allen county was held at Lima, on Saturday, the 11th of January, 1851, for the purpose of forming an agricultural society.

On motion, Samuel P. Tingle was called to the chair, and Hugh Dobbins was chosen secretary pro tem. Whereupon a committee of five, consisting of Joseph Shotwell, Wm. S. Rose, James Huston, James Mendenhall, and Matthew Dobbins, were appointed to draft a constitution for the government of the society ; which committee reported a constitution for the government of said society, which was unanimously adopted, and signed by over thirty members.

The society then proceeded to the election of officers for the ensuing year, which resulted as follows :

MATTHEW DOBBINS, President.	
JOSEPH SHOTWELL, Vice President.	
SAMUEL P. TINGLE, Treasurer.	
HUGH DOBBINS, Secretary.	
JAMES HUSTON,	} Managers.
JAMES MENDENHALL,	
GEORGE RANKINS	
ISAAC MERCHANT,	
J. H. RICHARDSON,	

A condensed report of the first annual fair of the Allen County Agricultural Society.

This fair, held in this place on the 21st October, 1851, was attended by a large number of the farmers and others of our county, and from the degree of interest which appears to be taken, we are quite sure that all take a deep interest in its welfare. For the first of the kind in our county, we think we may challenge comparison with any other county in north-western Ohio. The number of horses, cattle, sheep, hogs, &c., far surpassed the most sanguine expectations of its best friends, and the quality of the different kinds of stock was much better than could even reasonably expected, and the quality of the fruit is not surpassed by any State.

On the afternoon of the same day, M. H. Nichols, Esq., of Lima, Ohio, delivered an appropriate address to the members of the society and others in attendance, after which the premiums awarded by the several committees were made known.

HUGH DOBBINS, *Secretary*.

Lima, Dec. 30th, 1851.

LIMA, February 27th, 1852.

Abstract of the Treasurer's Report.

Amount received since the organization of said society, and up to the present time, as follows, to wit:

Received from members.....	\$66 00
Received from county treasury.....	60 00
To al amount of receipts	\$126 00
Orders redeemed and filed.....	66 75
Amount remaining in treasury.....	\$59 25
Balance due O. S. Board for shows, is.....	\$30 00

There are no escheated lands in the county. The statistical returns of 1850 will answer well for 1851.

H. DOBBINS, *Sec. Allen Co. Ag. Soc.*

ASHLAND COUNTY.

Report of the Ashland Agricultural Society, for the year 1851.

The society has been in operation for one year, and has held one fair. The members of the society number one hundred and fifty-three.

Amount received by the treasurer, from members and others	\$164 00
Amount received from county	69 00
Total amount received	\$233 00
Paid out for premiums and expenses	119 10
Balance remaining in the treasury	\$113 90

Our first annual fair was held at Hayesville, on the 15th day of October. The number of persons present, the quantity and quality of articles, and the number of animals exhibited, exceeded the most sanguine expectation of the friends and officers of the society.

1. **PRINCIPAL CROPS.**—Wheat, corn, rye, buckwheat, potatoes and clover.

2. **WHEAT.**—This is our principal crop. Average yield, 20 bushels per acre. Many of the farmers have raised this season from 30 to 40 bushels per acre. Price 50 cents per bushel.

3. **CORN.**—Almost a total failure, owing to protracted drouth. Price $37\frac{1}{2}$ cents per bushel.

4. **OATS.**—30 bushels per acre. Badly injured by drouth. Price 25 cents.

5. **RYE**—15 bushels per acre. But little raised. Worth 40 cents.

6. **GRASS AND HAY.**—Badly injured by drouth. Not more than half a crop.

7. **ROOT CROPS**—Potatoes much injured by drouth and rot. Worth 50 cents per bushel. Have been an uncertain crop for several years.

8. **FRUIT.**—We have some fine apple orchards, but little attention has been paid to improvement of the peach and cherry. Several varieties of grapes have been introduced within a few years, and have done well. The fruit crop, this last year, was a total failure, except upon a few high localities in the county.

9. **SEEDS**—Clover is a great article of export. Short crop this year. Worth \$5. Timothy is worth \$2.

10. **OTHER CROPS.**—Some buckwheat raised for home consumption. But little flaxseed produced. Some broom corn. No tobacco, mustard or madder.

11. **DAIRY PRODUCTS.**—No large dairies in this county, but a large amount of butter is exported. No cheese exported. In the north part of our county, they have some fine Durham cattle, that will compare favorably with the finest in the State. In the south part, cattle are all of the native stock. Beef worth \$3 to \$4, net.

12. **SHEEP AND WOOL.**—There has been great improvement in the grade of wool in this county, within two years past. Large numbers of fine sheep have been

introduced into our county from the east, which have proved a good investment to our farmers. The price of wool was unusually high last year, ranging from 35 to 50 cents per pound.

13. **Hogs.**—The most of our hogs were sold to drovers, and taken to the eastern markets on foot. But few hogs were slaughtered this year, owing to the scarcity of corn. Price \$4. Our stock of hogs is very indifferent, and but little attention is paid to their improvement.

14. **Horses.**—A great deal of attention is paid to the improvement of our horses. "Camden" and "Post Boy" horses, of the purest blood, have been in our county for some time, and their produce are much admired for their fine appearance and action. A "Camden" colt, the property of L. M. Pratt, took the first premium at our fair.

Messrs. Scott & Harmon have introduced some young "Bostons," that are very promising, the oldest of which is three years old, was sired by "Old Boston," and is out of "Polly Hopkins," by Bertrand. He is perfection in color, of good size, and fine action and appearance. The younger Boston is by "Boston," and his dam by "Grey Medoc."

John Scott, sen., has introduced a fine bay stallion of the "Morgan" family, that has been much admired, and has been well patronized. Messrs. Porter, Hall & Fox, of Sullivan, have a good horse, "Chesterfield," of fine appearance, and who has a host of friends wherever he goes. John Harvey, of Green township, has a cream of the "Blucher" stock, that took the first premium for draft horses at our fair.

We think we can safely say that we can show the finest stock of horses of any county in the State. Good marketable horses sell at from \$90 to \$125.

15. **IMPLEMENTS.**—Wheat-drills have been introduced, and are well liked. Pitt's threshing-machines are about the only kind in use. John Ball's self-sharpening plow took first and second premium at our fair.

16. **MILLS.**—We have some 20 grist-mills, 30 saw-mills, and several woolen factories in our county. The only woolen goods exhibited at our fair, were from the factory of Messrs. Reynor, Risser & Co., of Ashland, and reflected great credit on their establishment, which is much the largest and best conducted of any in our county.

The officers of our society are:

JOSEPH WORKMAN, President, Hayesville.	
JOHN SCOTT, Jr., Secretary,	"
WM. McNEIL, Treasurer,	"
ROBERT COWAN,	} Managers, "
GEORGE RUCHANAN,	
GEORGE STOTT,	
JOHN HARVEY,	
DAVID FOX,	

JOHN SCOTT, Jr., *Secretary.*

December 1st, 1851.

ASHTABULA COUNTY.

Agricultural Report for the year 1851.

The principal productions of this county, stated in the order of their relative value, are, cheese, cattle, hay, corn, oats, sheep, butter, horses, hogs, wheat, apples, buckwheat, rye, potatoes, peaches, flax, beans and tobacco.

Cheese continues to be the great staple of export from this county. Great pains have been taken by such of our dairymen as believe it to be the true policy to make the raw material net them the greatest possible income, to manufacture nothing but an article that will rank high in market. If the price at which an article sells at home and abroad, may be taken as an index of the real quality of the article, then will some of the cheese manufactured in Ashtabula county the present season be entitled to rank as *first* quality. Some of our best dairymen have sold their cheese this season, at home, for prices ranging from six to seven cents per pound. This kind of cheese is eagerly sought after by dealers, and sells readily at a profit in the market, while that of inferior quality and less price remains a drug upon the hands of the purchaser, or sells at a sacrifice. I believe it to be the concurrent opinion of all our principal dealers in cheese, that the article that is really worth the highest prices at home, and commands it, is almost entirely the only one upon which they realize any profit. A reference to the account of sales of cheese made in any of the principal cheese markets, would show at a glance who made a good article, and one that would return a profit to the dealer as well as to the manufacturer.

It is not uncommon for local dealers in cheese (and by this I mean those who buy most of the cheese made in a particular township) to receive an "account of sales" something like the following :

Sold	—	boxes	cheese,	marked	A,	at	7	cents.
do		do		do	B,	at	8	cents.
do		do		do	C,	at	1½	cents.

There can be no natural causes at work that would make this difference in the market, in cheese made in the same neighborhood ; but the difference is owing to lack of skill in the manufacture. There is no moral rule that would require that the local dealer in cheese should pay as much for the article that will bring but 1½ in market, as for that which will bring him 8 cents, leaving a net profit of one or two cents per pound ; and yet such is the relation of the parties that it is generally the case, that at home the worthless article brings the same as the valuable. In past years, however, this has been true to a greater extent than at present.

Many of the dealers in cheese have learned by sad experience the hazard of paying high prices for a defective article, and more wisely, and justly too, discriminate between good cheese and poor. Many of our farmers, too, dissatisfied with the indiscriminate policy of the dealers, have taken to shipping on their own account, the effect of which has been to throw the cheese into market more upon its own

inherent merit. In this branch of agricultural labor, as in every other, we have men destitute of the skill requisite to the production of the best possible article, and also destitute, in many instances, of those elevated principles prompting to action and endless progress among the more intelligent and enterprising of our farmers. In this department of labor, as in every other, success depends upon good common sense, combined with practical knowledge, and not upon stolid ignorance. To insure success in any vocation, there must be present, to conduct, at least one well regulated head; and in a State like ours, where almost every farmer owns the land he tills, I see not how we may expect the highest success in every branch of agricultural labor, until the farmer shall fully appreciate the importance and dignity of his calling, and resolve upon, and carry into execution, a course of action corresponding thereto.

Cheese factories continue to be carried on as extensively as in any other year, in our county. This system of manufacturing cheese tends to lessen very much the quantity of poor cheese, placing the greater part of the labor under the supervision of men of skill in this business. But even here the effect of bad *home* management is perceivable many times, in the mottled appearance of the cheese, which not unfrequently cuts down the price a half cent on the pound.

Notwithstanding there is much poor cheese still made in Ashtabula county, the quantity is yearly growing less. Enough of a good article finds its way to market from year to year, to save the character of our county as a cheese-making section; and if the same interest shall continue to be felt in the business for years to come, as in the past few years, we may confidently expect that our cheese will be sought after with avidity by the consumers of this luxury.

No very novel improvements have been introduced, since the last report from the county, in the business of dairying. The chief desideratums in the making of cheese, are neatness and skill in combining the substances that compose it, and large, well-ventilated rooms for curing for market.

While upon the subject of cheese-making, perhaps it would be well to speak of butter, the other product of the dairy of considerable consequence in the county. Much more interest is felt in the manufacture of this product than a few years ago, and the results are a better article and a better reputation abroad. Considerable quantities of butter are annually sent to the eastern markets, on orders from produce dealers, and when put up in a judicious manner, it meets with ready sale at the highest market prices.

Nothing has done more to injure the reputation of "*Ohio Butter*," than the careless manner of putting up practised by merchants. High authority affirms that "a little leaven leavens the whole lump;" and so a little rancid butter thrown into a barrel with the good, will very soon impart a bad flavor to the whole, giving the whole the unenviable soubriquet, "*Ohio grease*."

When the rapidly increasing facilities for getting to market without delay shall have brought the dairymen of this region within one day of the great commercial emporium, it is not presumptuous to suppose that, with what we have of Yankee

energy and enterprise, we shall be able to send to market an article of butter that will compete successfully with the far-famed butter of Goshen.

Of the exact quantity of butter and cheese made in the county, I am not informed. Probably the cheese would not fall much below 2,500 tons, worth at least \$250,000.

The past two seasons have been unfavorable to the highest success in the business of dairying, owing to the prevalence of drouths and a consequent failure of the grass crop to a considerable extent. To counteract, so far as might be in their power, the injurious effect of drouth upon the pastures, many of the dairymen make a practice of sowing corn broadcast for feed for their cows during the latter part of the season.

This is thought to be a very wise arrangement, as the stock is thereby kept in better condition, and an increase gained in the quantity of milk, amounting to some 8 or 10 per cent. One acre of ground, not unfrequently, will produce 8 tons of cured fodder—equal, many think, to the same number of tons of hay, for wintering stock.

CATTLE.—There are a good many fine cattle raised in this county, notwithstanding the prevalence of the cheese mania; and there is an increasing interest felt in this branch of husbandry. Many of our farmers are beginning to appreciate the benefit of raising only such stock as will sell readily at the highest prices, and are turning their attention more than at any former time, to the raising of Durham stock. Some of the full bloods of this stock, exhibited at our county fair, this season, called forth high commendations from some of our best judges of stock in this and other counties of the State. There were also exhibited some fine grades of cattle, and some of these changed hands at the fair, at prices that indicated the high estimation placed upon them by our breeders of fine stock. There were also exhibited some fine specimens of Devons; and these find admirers, notwithstanding their diminished size, when compared with full blood Durhams. A few "gentle Ayreshires" have been introduced into the county, but have not been sought after as yet by any great number of our farmers.

Our native breed of cattle, (so called) continue to be held in high repute by the dairymen, most of them stoutly affirming that they are ahead of Durhams, Devons, and Ayreshires, even as a dairy stock. However true this may be, it is certain that what we denominate the native breed, furnishes many cows of superior milking qualities. A dairy of well selected native cows, in favorable seasons, will give milk sufficient for from three to six hundred pounds of cheese. The price for this kind of cows ranges from \$12 00 to \$30 00 per head, in the spring. When the object is to secure a dairy stock, that shall possess milking qualities in the highest degree, the true policy is undoubtedly to breed from such sires and dams as are known to have sprung from the best milkers. In my own experience, I have hardly ever failed of securing a high order of milk cows from calves raised from a continuous line of good milkers—the descendants almost invariably equaling, if not surpassing the original stock.

HAY.—The kind of hay generally preferred by farmers, is timothy. In putting down land designed for meadows, most of the farmers make a practice of mixing

with their timothy seed a small quantity of clover seed. The average yield per acre will not go much above one ton per acre,—the past two years would not come up to this in some sections of the county. The quantity of seed used in seeding down, by different individuals, will vary from four quarts to one bushel per acre. The farmers who seed most thoroughly are the ones that complain the least of light crops of grass, while those who leave the grass to “*come in*,” seldom have a good hay crop “*to get in*.” Deep tillage is of great service to the grass crop, rendering it less liable to be thrown out by frost in winter and early spring, and also less liable to be injured by drouth.

Not much timothy or clover grown for the seed.

CORN.—This is fast becoming a very important crop, and a very profitable one to the farmer. There is but a very little land in the county upon which corn will not thrive. The average yield, from 40 to 50 bushels per acre. The usual way is to plant on turf land, ploughed in the fall, or early in the spring. The worm and the grass-hopper are the two worst enemies the farmer has to combat in raising corn. The latter of these insects did great damage to the corn crop the past two seasons in some localities, and the yellow wire worm, the present season, did a good deal of damage in many places. No experiments have as yet been instituted for the purpose of ridding the ground of these insects.

OATS.—The soil of this county is well adapted to the oat, and when not exhausted by too much cropping, invariably returns to the farmer a heavy yield of this kind of grain. On good land, well prepared, it is no uncommon thing to get 60 bushels per acre, but the average, perhaps, would not go above 40 bushels. The usual practice is, to sow after corn, on land to be stocked down. The kinds most generally cultivated here are the Friegland or Dutch oat, and the black oat. The latter is said to be much the heaviest by those who have raised it. I have not the means of knowing the quantity raised in the county. The price varies in different years, but will range from 20 cents to 31 cents per bushel.

SHEEP.—There is comparatively little attention paid to the growing of fine wool in this county. Our sheep farmers mostly prefer a large carcass and a heavy fleece, to a small carcass and light fleece. There are a few, however, who believe the growing of fine wool to be most profitable, and have turned their attention to Merinoes and Saxons, and their grades, as the kinds most available for their purpose. I am not aware that any of our breeders of sheep have even instituted a close comparison for a series of years, between fine wool sheep and good mutton sheep, with a view to ascertain which are really most profitable. A close comparison upon that point would be both interesting and profitable to those engaged in sheep husbandry.

The South Downs are regarded by many with much favor, and they seem well adapted to our soil and climate. Being of hardy constitution, they thrive much better than some other breeds upon our clay lands, and at the same time yield a very fair specimen of wool, and mutton of superior quality. Every thing considered, I doubt if a better breed of sheep for our soil has ever been introduced.

There are a few Leicesters in the county, and I hear them highly spoken of by their owners. I have not the means at hand of knowing the value of the wool annually produced in the county.

HORSES.—There are a good many horses annually raised in this county, and some very good ones; but in this branch of husbandry there is much chance for improvement. The farmers here generally, prefer horses of medium size and good action, to those of large size. Average price at 4 years old, \$80.

HOGS.—The hogs raised here are generally good. It has never been the object of the farmers to raise those of the largest kind, but they have endeavored to raise those that, well fattened, would weigh from three to four hundred pounds, and such as would combine fineness of texture and bone, with a disposition to take on fat readily. We have but few, if any, pure bloods, but a cross of Chinas, Byfields, and Berkshires, will comprise the distinctive elements of stock of hogs.

The farmers make but little pork for export, the low price for the past five years not affording, as they thought, sufficient remuneration.

WHEAT.—The wheat crop of this season, in this county, was unusually good—better than last year. Many of the farmers have abandoned wheat raising, under the impression that it is an unprofitable crop, when compared with the returns obtained from a dairy, and at present there is but little, comparatively, of this grain produced in the county. The two crops to which the premium, as best, and second best, was awarded, yielded, the former 45 bushels per acre, weighing 70 lbs. per bushel, or about 52 bushels per acre, reckoning 60 lbs. to the bushel; and the latter about 40 bushels per acre. Several other crops of winter wheat were offered for premium, and none came quite up to those to which were awarded the first and second premiums. The gentlemen who raised the crops that took the first and second prize, in their report to our county Society say, that the ground was ploughed deep, and that on which the 40 bushels per acre were raised, was subsoiled. This field had wheat on it last season, and received a light dressing of lime. The stubble was turned under, with about 15 loads of muck and barn-yard manure per acre, and subsoiled to the depth of 8 inches below the sole of first furrow-making, a depth of some 14 inches to which the ground was stirred. Kind of wheat sown, and the quantity per acre, not given. The soil, sandy loam. The field on which the 45 bushels per acre were raised, was ploughed with a large plough and a strong team, stirring the ground to the depth of 10 inches. A part of the soil on this field was some gravelly and a part quite clayey. Ten bushels of seed were sown on $5\frac{1}{2}$ acres. Kind of wheat, white Mediterranean. This field had been pastured for a series of years. These two fields of wheat represent fully the two extremes of soil in our county. The results of thorough culture on each, as these two yields show, would be remunerating crops of a kind of grain to the growth of which our soil has been thought unsuited,—returning a much larger profit per acre than has ever been realized under the dairy system from the same quantity of ground. Wherever lime has been used on our soil for the wheat crop, so far as I have ob-

served, the effect has been good, adding to the yield of wheat, and also supplying to the soil an element essential to a good quality of grass for pasture and meadow.

APPLES.—Considerable pains are taken to improve the character of apples and other fruits in this county. The show of apples at our county fair, considering the unfavorable season for fruit, was good. This kind of fruit has become quite an item of export, and yearly is increasing in importance.

BUCKWHEAT.—This kind of grain is but little cultivated, but does very well on our soil when sown in good season.

RYE.—This is not a kind of grain raised to any great extent in our county. When raised, it is used principally for feeding.

POTATOES.—This crop, this season, was almost a total failure in many parts of the county, owing to the ravages of the potatoe bug, or fly, that consumed the leaves before the tuber had grown to any considerable size. Where a fair crop was secured, I hear no complaints of the rot. Kinds usually cultivated, Peach-blow, Pink-eye, Neshanock, and Long John.

PEACHES.—In favorable seasons this kind of fruit does very well in this county, and a good deal of pains are taken to improve the quality of the fruit. In a dry state considerable is exported from the county, in favorable seasons.

FLAX, BEANS AND TOBACCO are cultivated on a small scale in this county. With proper culture, each thrives well on most of our soils.

The amount of fund arising from shows is \$75 00.

AGRICULTURAL SOCIETY.—The Agricultural Society of this county may be reported in a prosperous condition.

Abstract of the Report of the Treasurer of Ashtabula County Agricultural Society for the year 1851.

CASH RECEIVED, AND RECEIVABLE.

Oct. 8 and 9, from members.....	\$168 00
do from admittance fees.....	196 71
Old fund on hand, Oct. 10, 1851.....	38 50
Fund receivable from County Treasurer, by act of Feb. 27, 1847....	168 00
<hr/>	
Available fund for the year beginning Oct. 10, 1851.....	\$571 21
Balance remaining after paying liabilities.....	152 03

JAMES NORRIS,

Treasurer Ashtabula County Agricultural Society.

JEFFERSON, Dec. 2, 1851.

The officers of the Society for the current year are:

HON. C STOWE, President,	P. O. address,	Geneva.
N. L. CHAFFEE, Vice Pres,	do do	Jefferson.
JAMES NORRIS, Treasurer,	do do	do
N. E. FRENCH, Secretary,	do do	Lenox.
HON. S. D. DANN, }	do do	Jefferson.
NOAH HOSKINS, }	do do	do
HENRY KRUM, }	Managers.do do	Cherry Valley.
ERASTUS DEVAN, }	do do	Morgan.
ASA HAETSHORN, }	do do	Lenox.

In your circular you inquire when the Society in this county was organized, and who have been its officers. The first Society was organized in 1822, and lived about five years. From 1827 to 1842, there was no active agricultural society in this county. In 1842, a new organization was effected, which progressed till the passage of the present law for the encouragement of agriculture, when it reorganized under said law.

From Sept. 12, 1846, to Oct. 14, same year, EBENEZER WOOD was President, and T. H. C. KINGSBURY, Secretary.

The Board of Officers appointed Oct. 14, 1846, was as follows:

G. W. St. JOHN, President,	Post Office address,	Morgan.
HON. JONA. WARNER, Vice Pres.,	P. O. address,	Jefferson.
N. E. FRENCH, Secretary,	do do	Lenox.
J. WARNER, Jr. Treasurer,	do do	Jefferson.
JAMES STONE,	do do	Morgan.
HON. LYNDY JONES,	do do	Jefferson.
R. STORRY,	} Managers,	do do
Capt. J. B. WATSON,		do do Ashtabula.
FREDERICK UDELL,		do do Jefferson.

The Board of officers for 1847, was as follows:

G. W. St. JOHN, President,	P. O. address,	Morgan.
EBENEZER WOOD, Vice Pres.,	do do	Jefferson.
J. WARNER, Jr. Treasurer,	do do	do
N. E. FRENCH, Secretary,	do do	Lenox.
JAMES STONE,	} Managers.	
E. A. MILLS,		
WALTER STORY,		
S. SARGEANT,		
ANDREW BAILEY,		

The Board for the year 1848, was as follows:

JEREMIAH DODGE, President,	P. O. address,	New Lynn.
E. WOOD, Vice President,	do do	Jefferson.
J. WARNER, Jr., Treasurer,	do do	do
N. E. FRENCH, Secretary,	do do	Lenox.
HON. JONA. WARNER,	do do	Jefferson.
HON. LYNDY JONES,	do do	do
FREDERICK UDELL,	} Managers,	do do
NOAH HOSKINS,		do do
A. E. AUSTIN, Esq.,		do do Austinburg.

The Board of officers for 1849, was as follows:

ABEL KRUM, President,	P. O. address,	Cherry Valley.
G. W. St. JOHN, Vice Pres.,	do do	Morgan.
J. WARNER, Jr., Treasurer,	do do	Jefferson.
N. E. FRENCH, Secretary,	do do	Lenox.
ZOPHER GEE, New Lynn,	} Managers.	
H. F. GIDDINGS, Wayne,		
HENRY E. PARSONS, Ashtabula,		
ALEXANDER OSBORNE, Morgan,		
II N. SMALLLEY, Lenox,		

The above Board held over from time of appointment till Oct. 9, 1851.

Respectfully,

N. E. FRENCH.

ATHENS COUNTY.

The President and Secretary of the Athens County Agricultural Society, in reporting to the Ohio State Board of Agriculture, as required by law, submit as follows :

The Athens County Agricultural Society was organized on the 13th of January, 1851, and numbers 123 members.

The names of the officers for the current year, and their post office address :

SABINUS RICE, President, Amesville.
 ZIBA LINDLEY, V. President, Hebardville.
 GEORGE PUTNAM, Secretary, Athens.
 A. B. WALKER, Cor. Sec'y, "
 J. M. DANA, Treasurer, "

HENRY BRAWLEY, Amesville,
 ELEAZER SMITH, Athens,
 ALEX. LOVE, Alexander,
 HIRAM STEWART, Savannah,
 CHAS. DICKET, Sharp's Fork, } Managers.

The annual meeting for the election of officers for the ensuing year, will be held in January next, when their names will be duly reported to the State Board.

The report of J. M. DANA, Treasurer, &c.:

Amount received from 123 members.....	\$123 00	
Amount received from county.....	91 09	
		\$214 09
Paid out amount of premiums.....	153 25	
Paid out for Record and Ledger.....	3 25	
Paid out to Committee of Arrangements.....	3 25	159 75
Leaving balance in Treasury.....		<u>\$54 34</u>

On the 15th day of October, 1851, was held the first annual Fair of the Athens County Agricultural Society.

The attendance of members and others on this occasion was highly gratifying, and the number and variety of articles on exhibition, as well as their quality, exceeded the anticipations of the Board and all others in attendance. Many of the specimens exhibited during the day, both of stock and manufactured articles, were highly creditable to the producers; exciting in others the disposition to rival the same excellence on similar occasions hereafter.

The exhibition occupied but one day, but awakened an interest that will long be remembered by our citizens.

The annual Fairs hereafter, will require *two days*, and from the evidence already given of their high appreciation of these occasions, our citizens will no doubt mani-

fest a growing interest in the future operations of the Society, now considered to be established upon a firm basis.

The whole amount received during the year for the exhibition of public shows in this county, is \$120 00, as we are advised by the County Auditor.

There are no escheated lands in this county.

SABINUS RICE, *President*.

GEO. PUTNAM, *Secretary*,

By A. B. WALKER.

Athens, Nov. 29, 1851.

In relation to the crops reported to the Society for premiums, the following may be remarked :

WHEAT CROP.—Ezra Phillips, of Ames township, represented that he raised on one acre and three rods of ground, 45½ bushels of wheat. This statement is sustained by the proper affidavits of those measuring the ground, assisting in cutting, threshing, and cleaning the grain; the weight of which was 61 lbs. to the bushel. This crop was grown upon a lot used seven or eight years for pasturing and fattening hogs; was plowed deep, harrowed, the seed sown, (one and a half bushels on the lot,) then plowed in, and afterwards harrowed. The ground was bench land on a small creek, and was not manured except in the way it had been used for a hog lot. The crop was put in the first week in September.

CORN.—Parker Carpenter reported his crop of corn, the product of one acre being 120 bushels and 2 quarts. The necessary affidavits accompany this statement.

This crop was grown on second bottom of the Hocking river land, near Athens, upon sward land broken up pretty deep in the month of February, with a team of three yoke of heavy cattle. Before plowing, the land was freely manured. After harrowing, the ground was marked out 3 by 3½ feet apart, and the corn planted late in April. The tending was, plowing four times, and hoeing twice.

Alanson Hibbard, in Dover township, raised 98 bushels and 3½ pecks on a measured acre, cultivated as follows: The ground was run bottom, that had been cleared some 30 years, and cultivated alternately in grain and grass; upon which 20 cart loads of half rotted manure was applied in the spring, and plowed the last of April. The ground was then harrowed and furrowed each way, 3 feet 2 inches apart, and three stalks left in each hill; the corn was harrowed twice when very young, (too soon,) plowed twice, and hoed once.

This case was accompanied with the proper affidavit, and received the second premium at the county Fair.

POTATOES.—Amos Miller reported the product of one-quarter of an acre of ground cultivated in potatoes. The crop was grown on sward land that had been cultivated one year in corn, without any manuring or extra care. This was Hocking bottom land, and the crop was planted about the 25th of May. No. bushels, 40½, verified by the usual affidavits.

ATHENS, March 4, 1852.

W. W. MATHER:—

DEAR SIR— I send you, herewith, the names of the officers of our Agricultural Society for the present year, with their Post Office Address.

DR. WM. CAMPRELL, President, Hebardville.
 HIRAM STEWART, Vice Pres't, Savannah.
 HENRY GLAZIER, Recording Sec'y, Amesville.
 A. B. WALKER, Cor. Sec'y, Athens.
 JOSEPH M. DANA, Treas'r, Athens.

GEORGE PUTNAM, Athens,
 JOHN B. BROWN, Amesville,
 ALBERT VORHES, Albany,
 LORENTIUS WEETHEE, Millfield,
 JAMES DICKEY, Sharp's Fork, } Managers.

Respectfully, yours,

A. B. WALKER, *Cor. Sec'y.*

BELMONT COUNTY.

M. L. SULLIVANT, *Prest. O. S. B. A.*

DEAR SIR:—In compliance with the request of your circular, to report the time the Belmont County Agricultural Society was organized, and what officers have served in successive years of its existence, and their post office address, I do hereby report as follows, viz :

The Belmont Agricultural Society was organized on the 21 day of April, A. D., 1849, and held its first Fair in the town of St. Clairsville, on the 30th day of October. The officers elected were as follows :

SOLOMON BENTLY, President, St. Clairsville.
 JESSE BARTON, V. President, Colrain.
 SMITH HOLLOWAY, 2d V. Pres't, St. Clairsville.
 H. J. HOWARD, Rec. Secretary, "
 JOHN DUNHAM, Cor. " "
 ROBERT A. MILLER, Treasurer. "

KERSEY KINSEY, St. Clairsville,
 ASA THOMAS, Barnesville,
 JOHN JOHNSON, St. Clairsville,
 IRA LEWIS, Belmont,
 BENJ. BAILY, Colerain,
 JOEL WOOD, Martinsville,
 C. HOOVER, Morristown,
 JACOB HOUSER, Colerain,
 REESE LEWIS, Belmont,
 JAS. MCCORTNEY, Uniontown,
 P. R. CHAPMAN, Hundrysburg,
 J. NIESWANGER, St. Clairsville, } Managers.

The Second exhibition of the Society was held in the town of St. Clairsville, on the 29th and 30th days of October, 1850. The following officers were declared duly elected for the ensuing year, to wit:

SOLOMON BENTLY, President, St. Clairsville.
 JESSE BARTON, V. President, Colerain.
 J. H. HEATON, Treasurer, St. Clairsville.
 R. J. ALEXANDER, Secretary, “

PERRY HULSE, St. Clairsville,	} Managers.
SMITH HOLLOWAY, “	
IRA LEWIS, Belmont,	
J. NIEBWANGER, St. Clairsville,	
J. T. SCOFIELD, Barnesville,	

The third exhibition of the Society was held in the town of St. Clairsville, on the 23d and 24th days of October, 1851. The Society convened at the Court House. The object of the meeting having been stated, on motion of J. E. Eaton, Esq., the Society proceeded to elect the following officers for the ensuing year, and after counting the votes, the following officers were declared duly elected:

CHRISTOPHER HOOVER, President, Morristown.
 WILLIAM ESTEP, Vice President, Stoystown.
 JAMES MCG. KERR, Secretary, St. Clairsville.
 J. H. HEATON, Treasurer, “

WILLIAM SHARP, Uniontown,	} Managers.
J. T. SCOFIELD, Barnesville,	
A. A. ARICK, St. Clairsville,	
HIRAM PENNINGTON, Richland,	
BENJ. H. WRIGHT, Colerain,	

A copy of the printed list of premiums offered and awarded by the Society, together with the Treasurer's report as published, is hereunto annexed.

All of which is most respectfully submitted.

Signed,

C. HOOVER, *President.*

J. MCG. KERR, *Secretary.*

N. B. The Society consists of 187 members.

To the President of the State Board of Agriculture:

The third annual Fair of the Belmont County Agricultural Society was held on the 23d and 24th of October, A. D., 1851, in the town of St. Clairsville.

The first day was pleasant and the people crowded our town more than at any of our former Fairs. The spirit of emulation seemed to be perfectly aroused. The number of horses entered for premiums were numerous, and were graded from the best blood down to the dung hill stock, all of which made a fine show, and was much praised by the spectators; in fact, it was proclaimed by some Eastern horse-drover, that our county excelled in horses, for all purposes, any county in the

State. Our cattle made a good appearance, with some good blood, but did not number as many as last year, but supposed to be of better quality. Our hogs and sheep exhibited well; our sheep much improved since our first Fair, and a disposition is clearly manifested among our wool growers that they can and will be equal with any other county in grade and quality of wool. Our hogs are much improved in quality since last year; much pains is taken in obtaining good blood; the Yorkshire, Berkshire and Shropshire stock seem to be much admired, they mature their growth from twelve to sixteen months, and weigh from two to three hundred and fifty pounds when fatted.

The second day of the Fair was also very fine and pleasant, and the crowd of people in our town has not been equaled; and the fair ladies of the town and vicinity, indeed, I might say from every point of the county, and elsewhere, in their blooming beauty, added gracefully to this day's operation. The number of these lovely creatures was estimated by good and competent judges to number from eight to ten hundred. We hope bachelors will take courage and attend our Fair, in future.

The articles exhibited by those fair ones, such as shell-work, needle-work of every description, bed quilts, coverlids, carpetings, &c., together with divers representations of vines and flowers, wrought by their hands and needles, almost surpassing nature itself, all of which prove most clearly that the fair sex possess a genius of the highest order.

1. **PRINCIPAL PRODUCTS.**—Wheat, Corn, Oats, Barley, Rye, Buckwheat, Potatoes, Tobacco and Hay.

Our wheat this year has been a superabundant crop; average yield, this year, at a low estimate, 25 bushels per acre; no complaint of any defect in this year's growth, well filled and well matured, weighing from 60 to 64 lbs. per bushel; varieties, Mediterranean, Red-chaff bearded, and White bearded, the latter preferred by millers, but subject to rust and sunblight in light soil—does best in heavy limestone land; Bluestem most in use for the last few years; White, Blue or Purple-stem has been lately introduced into our county, and is much admired, and thought by those who have tried it, to be a sure and profitable wheat; White Flint and Club-head, a very good wheat, but very uncertain. The above varieties, except the two latter, are well adapted to the soil of this county.

Our principal markets are Wheeling, Bridgeport, Patterson, and Kinsey's Mills, four miles west of Bridgeport, and some other points in the south part of the county, that I cannot name, make a market for the south and southwest parts of the county.

Prices, at this time, range from 50 to 60 cents per bushel.

2. **CORN.**—Usual average yield, from 40 to 60 bushels per acre; this year, a perfect failure on most of uplands, in consequence of grub-worm and drouth, will not average more than half a crop; some of our bottom lands have a fine and some abundant crops—being low, damp land the drouth did no injury. This

article is mostly consumed in the county. Prices range, at this time, from 33 to 37½ cents per bushel.

OATS—Also a shorter crop than usual; average from 33 to 40 bushels per acre; this year, in consequence of drouth, not more than 30 to 35 bushels per acre. Price, from 25 to 28 cents per bushel—higher prices are anticipated.

BARLEY, RYE AND BUCKWHEAT—Not much raised. I am not informed of the yield or price. I believe some farmers have sold Barley in Wheeling, to brewers, at 55 cents.

POTATOES—Not a very abundant crop this year—said to be more healthy and free from rot than usual;—know of no definite experiment as to culture. Sweet potatoes failed much in consequence of drouth.

3. **TOBACCO** has been one of the staple articles or products of Belmont county, and has brought great revenue to this section of the country. Our planters anticipated a large crop this year, but in consequence of dry weather setting in at the usual time of planting, has curtailed the quantity that would have been planted, and what was planted, in consequence of the drouth, was very imperfectly matured. Last year ready sale at four to six dollars per hundred pounds, this year dull at three to four dollars per hundred pounds. Our tobacco buyers estimate the number of hogsheds from twelve to fourteen thousand—eight hundred pounds per hogshed.

4. **HAY**—meadows, timothy and clover mixed for pasture—usual yield one and a half to two tons per acre. This year upland meadows very light, in consequence of the dry season; little or no seed for transportation; hay worth from five to eight dollars per ton; clover seed worth four dollars per bushel; timothy seed two dollars for home consumption; little or no flax seed—little flax raised in the county.

5. **DAIRY PRODUCTS**.—No extensive dairies in our county; but little cheese made except for home consumption; considerable butter above home consumption, which is transported east, ranges in price from twelve and a half to twenty-five cents per pound. Cows—some mixed bloods, common cows preferred for milk.

6. **PORK**.—Salters are bidding \$4 50 per 100lb net—drovers bid from \$3 25 to \$3 50 per 100lb gross; the quantity supposed to be less than last year—the advance in price will make up the deficit—the number of hogs returned by assessors, per Auditor's book, 22,537, valued at \$37,955.

7. **CATTLE**.—The number, as per Auditor's book, 15,287, valued at \$143,781, of which number it is supposed that five thousand are disposed of to butchers and drovers and for home consumption; prices of this class range from \$13 to \$20 per head.

8. **HORSES**.—Our horses form a very important item in this county—the number, as per Auditor's book, 9,687, valued at \$424,486; a large number are annually bought by dr. vers, and taken to foreign markets. Horses raised in this county please eastern buyers, and are bought and driven off at an early age; average price at four years old, from \$80 to \$95 per head.

9. The number of Sheep, as per Auditor's book, 65,810, value \$39,626. Our sheep are much improved since an Agricultural Society has been organized. Some sheep from Washington county, Pa., and Brooke county, Va., were shown at our fair, which has created some zeal in our sheep men, and a disposition to improve is manifest. The French Merino and South Downs are the sheep spoken of—prices of wool, 31 to 44 cents.

10. IMPROVEMENTS.—Threshing machines and wheat drills on improved plans are now in use in our county. Plows are also improving in this county. Mr. Hiram Pennington, of our county, brought a plow to the plowing match at our fair, with which he took the premium. It excels any that I ever saw—I think he called it a New York plow—it is a double sheered and two mould boards. To give a description of the plow and its performance, would make this section of my report too lengthy, but would recommend all who have smooth heavy sward land, to try this plow.

11. FRUIT.—Our fruit almost an entire failure, in consequence of the late and severe frost when in bloom; and drouth through the summer rendered what little there was unsound and worthless. Our county abounds with fine orchards of choice grafted fruit of many varieties of apples, pears, peaches, quinces, cherries, plums and grapes. Some vineyards, from which considerable wine has been made and sold at Wheeling, at \$1 per gallon; there are also a number of nurseries in the county in full growth, to supply the wants of those that wish to improve their fruit and plant new orchards.

12. MILLS AND FACTORIES.—I know of no alteration—they continue about as they were last year—reference may be had to last year's report.

13. MINERALS.—No new discoveries; our coal mines still continue to give employment to capital and labor. The shipping at this time is brisk—the river is in fine boatable order, and our coal traders in fine spirits.

14. I know of no isolated experiments that have been tried in the culture of the product of the soil, but from the appearance of the farms of this county there must be a change. Farms generally exhibit a better appearance—everything calculated to make manure is carefully saved and prepared for the field; fence rows cleared out, good fences built up, old and new buildings cleaned up and painted, fields not occupied in grain have the surface covered with grass sward; indeed, to all appearance, there is a renovation in the farms of Belmont county generally.

15. In conversation with Mr. D. Allen, Auditor of our county, on the subject of the amount of flour and wheat exported from the county; his experience and practice in transporting these two items for years, would of course give data from which we may state the probable amount exported for this year: Flour—number of barrels, from ninety to one hundred thousand. Wheat—number of bushels, from forty to fifty thousand.

15. The Auditor's book shows the amount received from show license and due the Agricultural fund, the sum of thirty dollars, (\$30.) No escheated lands in the county.

C. HOOVER, *President.*

TREASURER'S REPORT.

John H. Heaton, Treasurer of the Belmont Agricultural Society, in account with said society, for the years 1850 and 1851:—

	Dr.
To amount received from the estate of R. H. Miller, deceased.....	\$211 28
To amount of subscription for 1850.....	133 00
do do 1851.....	187 00
From county Auditor for 1850.....	156 00
do do 1851.....	173 00
For lumber and donations.....	4 00
	<hr/>
	\$864 28
	<hr/>
	Cr.
By amount paid out on orders.....	\$136 25
do do on premiums for 1849.....	5 00
On premiums for 1850.....	179 50
Of premiums unpaid for '49 and '50.....	9 00
do awarded for 1851.....	218 50
	<hr/>
	\$548 25
	864 28
	<hr/>
Amount unappropriated.....	\$316 03

JOHN H. HEATON, *Treasurer.*

BROWN COUNTY.

Annual Report of the President and Secretary of the Brown County Agricultural Society for 1851.

To the Ohio State Board of Agriculture:

This Society was organized on the 17th of January, 1850, and has been in operation about two years. The number of members belonging to it at the close of the first year, (1850,) was 158; the total receipts of the year were \$277, and the amount paid in premiums at the annual fair was \$124. The present number of members is 346, and the total receipts of this year, (1851, including \$108, the balance on hand of last year,) are \$537, \$409 of which have been paid out in premiums at the late annual fair. This shows a large and encouraging increase in the two great elements of prosperity, (men and means,) and augurs favorably for the future stability and ultimate success of the enterprise. The 2d annual fair of the Society was held at Ripley, on the 2d and 3d days of October, 1851. The number of persons in attendance was much larger than at the fair of last year—the number

of animals and other articles exhibited show an increasing interest in the objects of the Society, and bids us to hope that each successive fair will be but the precursor of a better one. Our county possesses all the constituents of agricultural prosperity. Fine climate, rich soil, convenient markets, and an enterprising and industrious population, our productions are various and profitable. The northern portion of the county is well adapted to grass and the rearing of stock; the middle or interior to the raising of wheat, oats and corn, and the southern portion to the cultivation of tobacco, hemp, barley, corn and oats. The broken and hilly lands immediately bordering on the Ohio river are found to be most happily adapted to the culture of the grape. All that we conceive now necessary to develop our rich resources, are good plank and McAdamized roads, four of which, we are pleased to state have been put under contract the present year, and two of them are now about being completed. The crops of the past season have generally been better than that of the previous one. The wheat crop was not quite so good, but the corn, oat, hay and tobacco crops have been much better. Fruit was almost an entire failure, in consequence of the late frost in the spring. Six premiums were awarded field crops at the annual meeting of the Society; one on hay, yield $2\frac{1}{2}$ tons per acre—one on corn, yield 120 bushels per acre—one on wheat, 28 bushels per acre—one on oats, 64 $\frac{1}{2}$ bushels per acre—one on buckwheat, 24 bushels per acre, and one on onions, 64 bushels on $\frac{1}{2}$ of an acre. The above crops were the only ones presented—the present prices of produce at Ripley, are—wheat 57 cents per bushel, corn 25, potatoes 25, oats 18, hay \$3 per ton, and pork \$4 25 per 100lb. On inquiry of the Auditor, it appears that fifty-seven dollars have been collected for the State Agricultural Fund. Herewith you find the list of premiums offered, marked (A.); the list of premiums awarded, marked (B.); the statement of competitors on crops, marked (C.,) and the Treasurer's Report, marked (D.,) all of which are made part of this report, and respectfully submitted.

Report of the Treasurer of the Brown County Agricultural Society, for the year 1851.

RECEIPTS.

Balance from last year's account.....	\$108 35
Received from members of the Society.....	240 00
Received from County Treasurer.....	136 00
Received from citizens of Ripley.....	48 50
Interest on funds from last year.....	4 42
Total receipts.....	<u>\$537 27</u>

EXPENDITURES.

Amount paid out for premiums	\$380 75	
do paid for printing	10 00	
do paid for collecting	5 00	
do paid for expenses of Fair	42 35	
do paid Secretary	15 75	
do paid Treasurer	10 00	
do premiums unpaid	29 00	
		<hr/>
		\$492 85
Balance in hands of Treasurer		<hr/>
		\$44 42

JOHN GLAZE,

Treasurer Brown county Agricultural Society.

We report in compliance with your request, the names and post office addresses of the several persons who have served as officers of the Society.

The Society was organized January 10th, 1850, and the following officers were elected for the ensuing year :

SAMUEL KERR, President, P. O. Decatur.
 ALEX. CAMPBELL, V. Pres't, " Ripley.
 REASON SHEPHERD, Secretary, " Ripley.
 JOHN GLAZE, Treasurer, " Russelville.

ETHERMAN W. DEVORE, Ripley.
 GEORGE W. BROWN, Russelville,
 JAMES TWEED, Ripley,
 DANIEL GILMORE, Ripley,
 SAMUEL G. MOORE, Russelville, } Managers.

Officers, elected January 17th, 1851 :

ALEX. CAMPBELL, President, Ripley.
 PHILLIP JOLLY, Vice President, Ripley.
 REASON SHEPHERD, Secretary, Ripley.
 JOHN GLAZE, Treasurer, Russelville.

JOHN WILLIAMSON, Russelville,
 ABSALOM KING, Georgetown,
 GEORGE SHEDAKER, Ripley,
 DAVID DIXON, Ripley,
 JAMES TWEED, Ripley, } Managers.

By a change of the constitution, the annual meeting was held on the second Tuesday of November, at Georgetown, when the following officers were elected for the ensuing year :

H. L. PENN, President, Georgetown.
 E. B. FEE, V. President, New Hope.
 NEWTON A. DEVORE, Sec., (declined.)
 JAS. F. THOMPSON, Treas., Georgetown.

ABRAHAM KING, Georgetown,
 JOHN MARKLEY, Georgetown,
 JAMES LOUDON, Georgetown,
 CHARLES RICHARDS, Georget'n,
 HENRY YOUNG, New Hope, } Managers.

ALEXANDER CAMPBELL, *President.*REASON SHEPHERD, *Secretary.*

C.

STATEMENTS.

The following statements accompanies the several applications for premiums on field crops, noticed in the above report :

CORN.

The ground upon which this crop of corn was raised, was a timothy and clover sod of ten years' standing ; was broken up in February last, nine inches deep, and was harrowed and run out and planted on the 10th and 11th of April. The mode of cultivation is, to wit : Harrowed once with the two horse harrow, and plowed four times with the double shovel plow. The soil is a clay loam with a clay subsoil.

Expense of Culture.

Plowing one acre	\$1 50
Harrowing and planting.....	1 00
Harrowing corn once	50
Plowing four times with shovel plow	1 00
Gathering, husking and measuring.....	1 50
Total cost	\$5 50
	Cr.
One hundred and twenty bushels of corn at 25 cents per bushel	\$30 00
Deduct expenses of culture.....	5 50
Net profit	\$24 50

GEORGE SNEDAKER.

WHEAT.

The soil upon which this wheat crop was raised, is the same as the corn ground, and was clover sod ; was plowed, the 1st of September, nine inches deep. The wheat (Mediterranean) was sowed about the 15th of September, one bushel and a half per acre, and harrowed twice with a three horse harrow, and then the ground covered an inch deep with loose straw.

Expense of Culture.

Plowing one acre.....	\$1 50
Sowing and harrowing	1 00
Spreading on straw	1 00
Cutting and threshing.....	2 50
Seed wheat, 1½ bushels, at 60 cents per bushel.....	90
Total cost	\$6 90

	Cr.
Value of 30 bushels at 60 cents per bushel	\$18 00
Value of straw	2 00
Total value	\$20 00
Deduct outlay	6 90
Net profit	\$13 10

GEORGE SNEDAKER.

OATS.

The ground on which the aforesaid oats were raised, is a light rich loam with a clay subsoil, and had been in corn the previous year. No manure was used. It was deeply broken up, say ten inches in depth, about the 1st of April, and immediately sown with what are commonly called "side oats," at the rate of about three bushels per acre, and then thoroughly harrowed in. The crop was harvested on the 21st of June, and cleaned up about the last of October. The actual yield of good clean oats, from one acre and one-fourth of ground, was two thousand five hundred and ninety-nine pounds, (2,599lbs.) or 81 bushels and 7 pounds, being 64 bushels and 29 pounds per acre.

●Expense of Culture.

Breaking up, sowing and harrowing ground	\$2 00
Three and three-fourths bushels oats at 25 cents per bushel	93
Cutting, shocking and hauling	1 50
Getting out and cleaning up	2 50
Total cost	\$6 93
	Cr.
Eighty-one bushels and seven pounds of oats, at 18 cents per bushel	\$14 62
Straw	1 00
Total value	\$15 62
Deduct outlay	6 93
Net profit	\$8 69

ALEXANDER CAMPBELL.

BUCKWHEAT.

To the Board of Directors of the Brown County Agricultural Society :

The crop of buckwheat certified to in the above affidavit was sown more for the benefit of my bees, than the expectation of profit in raising the grain. The soil on

which it grew was a mellow loam, with a clay subsoil. One acre of the ground was plowed about the 15th of April, eight or nine inches deep. On the balance of the piece, from which the soil was considerably worn and washed off, four or five loads of straw were spread in the furrows and plowed under, about the 15th of May. One bushel of seed sown on the whole piece about the 28th of June. The part on which the straw was spread was harrowed twice, the other was plowed with the double shovel, and cross harrowed to level the ground. Harvested between the 6th and 15th of October.

Expense of Culture.

Plowing the ground	\$2 00
One bushel of seed	50
Sowing, plowing and harrowing	1 00
Harvesting	2 50
Threshing and cleaning	2 00
Total cost	<u>\$8 00</u>
	Cr.
Twenty-eight bushels buckwheat at 50 cents per bushel	\$14 00
Deduct outlay	8 00
Profit of the crop	<u>\$6 00</u>

● REASON SHEPHERD.

ONIONS.

The specifications of my field crop of onions, raised by me this year, are as follows :

Fifty-four and one-fourth bushels at 60 cents

\$32 55

Expense of Culture.

Forty-two poles ground, rent, interest, &c.	\$1 00
Four loads of fine manure	1 00
One two horse team two days	3 00
One hand 13 days, at 75 cents	9 75
One pint seed	50
Total cost	<u>\$15 25</u>
	Cr.
Total value	\$32 55
Deduct outlay	15 25
Net profit	<u>\$17 30</u>

The soil on which the above was raised is a rich clay soil; plowed the usual depth, then manured and well harrowed; furrowed one way, about 15 inches apart, and planted in hills about the same distance; the surface kept level and clean. One pint seed to a quarter of an acre, is sufficient. It was planted as soon as the ground was in good order, say about corn-planting; the time for gathering will be governed by the season, generally by the 1st of October.

From my experience in raising onions, the net profit will average \$60 to the acre. They are of redish color, and raised from the seed each year.

As witness my hand.

RUSSELL SHAW.

HAY.

The ground upon which the above hay was raised is a clay soil. One gallon of clean timothy seed was sown on the above ground in March, 1849, it being in wheat. This is the second crop of hay off said ground since it was plowed. No other cultivation.

Expenses.

One gallon timothy seed	37
Harvesting.....	\$2 00
Weighing.....	1 00
Rent of land.....	2 00
Total expense	<u>\$5 37</u>
	Cr.
The hay at \$6 per ton	15 11
Deduct expenses.....	<u>5 37</u>
Net profit.....	<u>\$9 74</u>

SAMUEL G. MOORE.

BUTLER COUNTY.

BY JOHN M. MILLIKIN.

1. OUR PRINCIPAL PRODUCTS are Wheat, Corn, Barley, Oats, Hay, Fruits, Pork and Beef.

2. WHEAT.—The usual average yield of wheat, in this county, is about 15 bushels per acre. The census returns will, when published, show our crop of 1849, which was not half of our usual crop. I am enabled to state from reliable information, that such is the fact. One of our Deputy Marshals for this county — Mr

Lowes—in taking the crop of 1849, at my suggestion, also took the crop of 1850, in three of our average townships. The yield in these three townships, in 1849, amounted to 80,320 bushels, while the yield of 1850, in the same townships, amounted to 220,625 bushels! These three townships thus reported, will fairly show the difference in those years in the other townships. The yield of 1850, as per Township Assessor's returns, was about 18 bushels per acre. Our total crop in 1850, was at least 700,000 bushels. The crop of this year will fall but little below the crop of 1850. It is slightly less in quantity, but better in quality. We cultivate over 30,000 acres in wheat.

Our farmers cultivate nearly all the varieties known in the west. The mammoth heads of the Washington wheat, raised in 1850, captivated many; but their poor success during the past year, has caused it to be less esteemed. The winter of 1849 and 1850 froze out, in many places, more than one-half that grew vigorously in the fall. Mediterranean has been very extensively raised with us. It has, however, of late, fallen much in the estimation of millers, and those who like *white bread*. Other varieties were, with many, substituted in its stead, during the past fall. Genesee wheat has been introduced amongst us, and is decidedly popular with those who have given it a trial.

3. CORN.—We cultivate between 60,000 and 70,000 acres of ground in corn, which usually averages about 50 bushels per acre. Our Assessors returned 62,000 as the quantity cultivated, and 42 bushels per acre, as the product of 1850. The crop of 1851 is not only larger in quantity of acres, but better in yield. It is safe, therefore, to say, that Butler county produces annually over 3,000,000 bushels of corn. Immense quantities are now being daily delivered, on the canal banks, out of the field, and sells readily at 25 cents per bushel. Last year it sold at from 27 to 30 cents, out of the field.

4. BARLEY AND RYE.—Our county produces large quantities of this grain. We probably raise more bushels of barley than any county in the State, with the exception of Hamilton county. I have no data upon which to make a reliable estimate of the quantity raised. It is not so uniformly raised in every part of the county, as wheat, but the south and eastern parts of the county, raise it much more extensively. Our farmers sometimes make contracts for their crops for five successive years. The prices paid, under contract, varies from 50 to 55 cents per bushel. The yield of barley varies from 20 to 50 bushels per acre. Some claim to have raised in 1850, as high as 75 bushels per acre. I have no doubt that the average yield of the county is near 40 bushels per acre. Fall barley is almost universally sowed. Spring barley is regarded as an uncertain crop, and is but seldom sowed.

Rye is but seldom sowed.

5. OATS is generally raised in our county. Almost all our farmers raise some. The yield of the past season was good, averaging at least 30 bushels per acre. The price varies from 20 to 40 cents per bushel.

6. **GRASS AND HAY.**—Our timothy meadows, in an ordinarily good season, yield about $1\frac{1}{2}$ tons per acre. The past two seasons have been exceedingly unfavorable for growing large crops of grass. Clover is sowed for the improvement of the ground. It is but little raised for hay. For pasturage of hogs during the summer, it is regarded by our best pork raisers, as absolutely indispensable. Our best hog raisers prefer to pasture their hogs on clover, to any other mode of keeping that can be adopted. They would rather have them run on good clover pasture, than have them regularly and liberally fed on corn. The reason is obvious to those who have sought to investigate it. Clover produces bone, muscle and every other element which causes rapid growth. Corn produces principally fat. Our farmers desire their hogs to have a fine *growth* during the summer, and then make them *fat* with corn in the fall. Hay sells in the county from \$6 to \$10. Those in convenient reach of Cincinnati and Hamilton, usually realize \$10 per ton for their hay, sometimes more.

7. **ROOT CROPS.**—Potatoes are more extensively cultivated here, than any other article comprehended under this head. Our yield I should not estimate as exceeding, upon an average, more than 100 bushels per acre. We sometimes raise crops averaging 200 bushels per acre. Last season, an acquaintance of mine raised on 4 acres of *new ground*, 800 bushels of exceedingly large and fine meshannock, or "neshannock," potatoes, the large portion of which he sold for 70 cents per bushel! I have no doubt, after paying *all expenses*, that he cleared over \$100 per acre, on the four acres. Can it be beat? We have never been much troubled with any disease or been visited by any insect, which has done injury to our potato crops. Large quantities of potatoes are now raised in this county. Turnips are cultivated only by a few, and generally on new ground. Potatoes worth from 30 to 40 cents. Turnips about 30 cents.

8. **FRUITS.** Much progress is making in the cultivation of fruit, and more enterprising and intelligent agriculturists and horticulturists are introducing more choice and extensive assortments of fruits, than have been heretofore cultivated. There is, however, no danger of our becoming overstocked with either apples, peaches, pears or plums. We have a fair quality of apples throughout the county, and here and there some large and well-selected orchards of the finest peaches. One cultivator of peaches told me to-day, that he had sold in 1850, to the amount of \$2,500. I think he sold more. This year we have had almost no peaches, plums, quinces or pears. Occasionally an orchard could be found, situated almost above the reach of frost, which bore a few apples. The fruit crop of this county may be regarded for this year as a failure. I do not include in this general remark, grapes. There was a moderate yield of good Catawba grapes.

9. **SEEDS.**—Timothy, clover, orchard grass and flax seed, are each raised in our county. None of them in very large quantities for exportation. I am not prepared to say what is our average yield of either. Clover sells from \$4 to \$5. Timothy from \$1 50 to \$2 50. Orchard grass 50 cents. Flax seed at \$1.

10. **OTHER CROPS.**—We grow no hemp in this county, and the flax that is raised is for the seed, and not for the fibre. One of our paper mills uses some of the fibre in the manufacture of some kinds of paper. The "*filky weed*," is being raised by some who have been moved and seduced by "*filky lucre*," to wholly disregard "anti-tobacco societies," and the timely admonitions of those who have worn out their soil in the cultivation of that which is an injury to those who use it, and an abominable nuisance to those who do not.

11. **DAIRY PRODUCTS.**—Butter is produced in most families in the country, beyond their wants. It is generally gathered together by hucksters, and taken to Cincinnati market. I have no reliable data from which to make an estimate of the quantity produced. Our cows are generally native. Some of mixed breed, and a few Durham. We produce no cheese for export—not the 10th even, used in the county.

12. **SHEEP AND WOOL.**—Our farmers are not extensively engaged in raising sheep, either for wool or for mutton. We have but few sheep in the county. It is believed that our land is too valuable to raise wool in competition with those who can have pasturage from lands of comparatively low price. Sheep of good quality for mutton, suits us best. What we lack in *sheep*, we make up in dogs.

13. **PORK.**—Our people do not fatten as many hogs as heretofore. The price is unstable, and the cost of production so certain, where we can always command a fair cash price for our grain, that the farmers of this county do not so generally fatten large lots of hogs as in previous years. The quality of the breed of our hogs is unsurpassed. In some parts of the county almost all the hogs sold, average over 300 lbs. Some lots have been sold, averaging 400 lbs. The people of Washington county, Pennsylvania, when asked what breed of sheep they have, answer, "Washington county sheep." One part of our county, known as "Gregory's Creek," raises only "Gregory's Creek stock." They defy the world for good hogs. Some other breeders in the county raise of the same stock, and are equally celebrated. I have no means of making an estimate of the amount fattened each year.

14. **BEEF.**—The number of beef cattle is not equal to the demand, and they are therefore decreasing. We are scarcely raising as many as are fattened and killed in the county. Cattle are brought from Indiana and Illinois, and fattened in small numbers in this county.

15. **HORSES AND MULES.**—We raise some good horses, but scarcely enough for our own use. There is some good stock of the horse kind, in the county, but we are not paying proper attention to the breeding and raising of horses. We raise no mules. I do not know that there is a Jack in the county.

16. **IMPLEMENTS.**—We are not very far advanced in the use of all the economical and improved implements connected with the business of farming. We have various kinds of threshing machines. Two of Emery & Co.'s railroad horse power, have recently been brought into the county. They have some advantages worthy of attention. To thresh with them is not as one of our directors remarked "like

having a raising, with twenty men to feed, and horses to boot." Two persons can operate them. True, to run them properly, requires more hands. At most, only two horses and 4 hands are required. The machine may be placed in the barn, and you can thresh in wet and stormy weather, or at any time as may suit your convenience. During the past season, reaping machines was for the first time introduced amongst us. As yet, no mowing machines have been brought into this county. We need good machines for mowing grass; who will bring them to us?

17. **MINERALS.**—We have no coal, iron, or salt. Limestone of fair quality abounds.

18. **MILLS.**—We have grist mills and saw mills in almost every part of the county. The county is well supplied with water for mills. There are in the county, 5 paper mills, one of which runs 8 engines and 2 machines.

We have in Hamilton, a cotton mill and woolen factory, two saw mills, two paper mills, four grist mills, two foundries, two machine shops, one door and sash factory, a planing mill, turning shops, &c., &c., wagon and plow manufacturers throughout the county, and such other manufacturing establishments as are common in populous counties.

Report of the President and Secretary of the Butler County Agricultural Society.

After many unsuccessful efforts to organize an Agricultural Society, under our present laws, we were only last spring enabled to accomplish it. The requisite number of persons became members, a constitution was adopted, officers elected, and the society fully organized.

On the 14th of June, the officers resolved to make an effort to hold their *first fair*. A scale of premiums was prepared and published, and some efforts made to arouse our farmers from their lethargy, and to induce them to consider their interest. With much exertions, some favorable impressions were made upon the public mind. A few public spirited men in the several townships, determined to give us their aid, and to bring in whatever they had, which might contribute to the exhibition. Our Fair was announced to be held on the 2d and 3d days of October. Previous to the 2d, we had enclosed our grounds, erected a shed and made pens, trusting to the liberality of the public, to be able to raise means sufficient for the purpose of paying premiums and defraying expenses. In these expectations we were not disappointed. In other things we were disappointed. The public interest in our exhibition, had exceeded our most sanguine hopes. On the first day, we had an exceedingly fine show of horses. Our cattle and hogs were not so numerous, but still respectable for numbers and for quality.

In farm implements, in vegetables, in specimens of work made by the ladies, in domestic manufactures, in flowers, and in dairy products, our show, although not so good as it ought to have been, was very respectable indeed.

The public were really surprised that we had done so well in our first exhibition, and all felt encouraged by the effort which had been made. We had full assurance, that in another year we shall be able to have an exhibition which will be creditable to the society, to the county, and to the industry, taste and skill of our farmers, gardeners, mechanics, &c., &c.

The following is the condition of our finances, as per report of Mr. G. W. Tapscott, Treasurer :

GEO. W. TAPSCOTT, <i>Treasurer,</i> <i>To Butler County Agricultural Society</i>		Dr.
To amount received for badges sold members	\$381 00	
To amount received at gate of enclosure	125 90	
To amount from county	153 98	
	<hr/>	\$660 88
		Cr.
By amount paid for premiums	\$222 00	
By amount paid for enclosure of grounds, and other exp's,	118 80	
	<hr/>	\$340 80
Balance in Treasurer's hands		<hr/> <u>\$320 08</u>

It is proper to remark, that there are a few outstanding claims against the society not yet paid.

All of which is respectfully submitted.

FERGUS ANDERSON, *President.*

JOHN M. MILLIKIN, *Secretary.*

December 2d, 1851.

CARROLL COUNTY.

Report of the Secretary of the Carroll County Agricultural Society for the year 1851.

PRINCIPAL CROPS.—Wheat, corn, oats, wool and pork.

1. WHEAT.—Average crop 16 bushels to the acre, the aggregate being about 400,000 bushels. The "Blue Stem" is the principal variety sown. Not much improvement in the manner of cultivation—some broadcast ; drills not yet introduced.

2. CORN.—About an average crop this year, say 30 bushels to the acre—aggregate 250,000 bushels ; very little exported. Our county is hilly, consequently not so favorable to the growing of corn.

3. **OATS.**—Average yield about 25 bushels to the acre ; aggregate amount raised about 275,000 bushels.

4. **RYE AND BARLEY.**—But little sown ; used by the producers for feed. Average 10 bushels to the acre ; aggregate 20,000 bushels.

5. **GRASS AND HAY.**—About an average crop of hay this season, say $1\frac{1}{2}$ tons per acre ; aggregate 20,000 tons, worth at this time \$5 per ton.

6. **ROOT CROPS.**—Potatoes having been, and still are, so much subject to the "rot," it is impossible to state what the average yield per acre is ; no remedy for the disease discovered with us as yet. Some attention is being paid to the cultivation of Mangel Wurtzel and Sugar Beet for stock, but not to any great extent. Other roots but little cultivated except turnips for table use.

7. **FRUIT.**—The fruit of our county is generally of an indifferent quality, the trees being generally seedlings, but of late has been much improved by grafting on the old stock. The establishment of a nursery near Augusta, in our county, by our enterprising fellow citizen, Mr. Samuel B. Marshall, a few years since, has had a tendency to excite more attention to the selection of good fruit trees among our people generally. Mr. Marshall's collection of fruit trees are of the most approved varieties, and judging from the large amount of his sales throughout the county, in a few years we will be "hard to beat" in the way of fruit. Our county is well adapted to the raising of fruit. The peach and apple crop, this year, is an entire failure, owing to the early frosts in the spring.

8. **SEEDS.**—Of flax, clover and timothy seeds, not much raised.

9. **OTHER CROPS.**—Very little attention paid to the cultivation of articles named in 10th question.

10. **DAIRY PRODUCTS.**—No cheese of any consequence made. About 150,000 lbs. of butter for exportation, worth 10c. per lb.; very little increase or improvement in this business. Our cows are of the "native stock."

11. **SHEEP AND WOOL.**—About 250,000 lbs. of wool, which would average about three-fourths Merino. Increased attention is being paid to this business ; the number of sheep is increasing and the quality improving. Black top Merinos are preferred.

12. **PORK.**—Aggregate amount of pork this year about 3,000,000 lbs. One-half of this amount, at least, was bought on foot and drove out of the county, the remainder was slaughtered at home. Average price \$3.75 per hundred. The stock has not much improved for a few years. There is a great deal of the "Porcupine breed" with us.

13. **BEEF.**—But little attention paid to the raising of cattle. Probably about 2,000 head sold annually ; worth about \$8 per head.

14. **HORSES AND MULES.**—About 300 horses are sold during the winter and spring for the eastern markets. Not much improvement in the stock ; heavy horses most in demand. No mules raised. Average value of horses \$80.

15. **IMPLEMENTS.**—Some attention is paid to their improvement since the organization of our society.

16. **OTHER IMPROVEMENTS.**—Not much progress in the way of improvement in any particular. In the northern part of the county some low lands have been improved by draining. It has been found to pay well. More attention perhaps is paid to clovering than formerly.

17. **MINERALS.**—Veins of coal light. Minerals have not been sought after.

18. **MILLS.**—No increase in mills or manufactories of any consequence. No iron furnaces nor salt wells, and very little potters ware made.

19. The Auditor states that \$20, (less per centage,) has been collected in this county from license to shows this year.

No escheated lands.

Report of the Secretary of the Carroll County Agricultural Society.

The society is in a very flourishing condition. It was organised on the 20th of January, 1850, by the election of the following officers, viz :

HARVEY COGSSELL, President,
H. A. STRIDGER, Vice President,
GEO. Y. HAMPSON, Treasurer.
A. S. RAMSAY, Secretary.

WM. HOLMES,
JAS. H. CHAMBERS,
JOHN BUCHANAN,
FREDERICK BRANDT,
SAMUEL R. PALMER, } Managers.

The number of members for that year was 112. Premiums awarded at the Fair, in October, of same year, to the amount of \$190. The premium crop of wheat was 44 bushels to the acre, corn 111 bushels to the acre. On the second day of the Fair, the following officers were elected for the year 1851, viz :

JOHN PALMER, President,
JOHN HOLE, Vice Pres't.,
R. J. ATKINSON, Treasurer,
J. D. PATTON, Secretary.

SAMUEL WILLIAMS,
JACOB DAGER,
THOMAS LEE,
THOMAS JAMES,
CHARLES FAWCETT, } Managers.

On the 8th day of September, '51, the Board met and appointed Geo. F. Kennedy, Secretary, (J. D. Patton having previously resigned.)

The society has held two fairs which were highly creditable to the farmers and mechanics of the county. Its second annual fair came off on Tuesday and Wednesday, the 29th and 30th days of October, 1851, and far surpassed that of the pre-

vious year, both in regard to the number and quality of the animals and articles exhibited. We refer to it with much pride, and intend that each annual fair hereafter shall be an improvement on the preceding one. It was estimated, by those who knew, that there was at least four thousand people present on the second day, being one of the largest gatherings ever had in our county. The weather was very fine, and the liveliest interest was manifested by those assembled. The interest taken in the welfare of the society has much increased since last year. The stock of horses exhibited far surpassed that of our last fair—the number of entries 77, of cattle 51, besides numerous large ox teams not registered. Of sheep, the entries were 109; of hogs, 21; of agricultural implements the display was respectable.

Other branches of the mechanic arts not so well represented. The entries for premiums on crops were 6, viz: Wheat 2, Corn 4. The premium crop of wheat was 39½ bushels per acre; of corn, 91½ bushels per acre. The entries were all accompanied by a statement of cultivation &c., as required by law.

In the miscellaneous department, the exhibition of the handiwork of the ladies was quite large, and far superior to that of our first Fair. Some grains, fruits and vegetables were exhibited, but owing to the lateness of the season, the display was not large. The plowing match came off on the afternoon of the second day. Light teams were entered and the contest was spirited.

The Fair, taken altogether, more than fulfilled the expectations of the managers, as well as those that attended it. There can be no doubt but that the public interest is promoted by the institution. Its good effects are already visible among us.

OFFICERS OF THE SOCIETY FOR THE PRESENT YEAR.

CHARLES FAWCETT, President, Carrollton, O.,
H. A. STIDGER, Vice Pres't, Carrollton, O.,
SAMUEL STERLING, Treasurer, Carrollton, O.,
GEO. F. KENEDY, Secretary, Carrollton, O.

ROBERT G. RAMSAY, }
THOMAS WIER, }
JOHN BUCHANAN, } Managers.
JOSEPH CELLARS, }
SAMUEL R. PALMER, }

Appended is an abstract of the Treasurer's report:

Treasurer of the Carroll County Agricultural Society, in account with said Society.

	Dr.
To amount received of Geo. Y. Hampson, former Treasurer.....	\$26 17
do do From County Treasurer.....	88 42
do do do 168 members.....	168 00
Total amount received.....	\$282 59

	Cr.	
By amount paid premiums at October Fair, 1851.....	\$212 00	
Incidental expenses	65 00	
		<u>\$277 00</u>
Balance remaining in treasury.....		\$5 59
R. J. ATKINSON, <i>Treasurer Carroll Co. Ag. Society.</i>		
Nov. 22d, 1851.		
All of which is respectfully submitted,		
GEO. F. KENEDY, <i>Sec'y. Carroll Co. Ag. Society.</i>		
Jan. 7th, 1852.		

CHAMPAIGN COUNTY.

URBANA, December 2, 1851.

W. W. MATHER, *Corresponding Secretary:*

DEAR SIR — Your circular came to hand in due time, and in reply can only say, that our farming community have done very well for the last year. We have not noted any special improvements in agriculture, except an increasing interest in the manner of cultivation. Our farmers are striving to raise good crops by using the means; and notwithstanding the excessive drouth of the past season, have succeeded in raising average crops of the two great staples of our county, Corn and Wheat. Hay was short. No fruit of any consequence; which fact is now being realized by those who enjoy the luxury of good winter apples.

The easy access to our city markets, by railroad, has raised the price of all marketable commodities, so that our farmers are realizing profits heretofore entirely neglected, because unrewarded.

Our county agricultural society is increasing in interest, and many of our farmers believe that county and district fairs would promote the true interests of agriculture better than State fairs, which must necessarily attended with great expense.

Our agricultural society was organized on the first Saturday in December, A. D. 1849. Its officers for the first year were,

WM. VANCE, President, Urbana.
 SMITH MINTURN, Vice President, Urbana.
 DANIEL SNIDER, Treasurer, Westville.
 JOHN H. YOUNG, Secretary, Urbana.

JOHN H. BRYANT, Urbana,
 JOHN WELLER, Millerstown,
 H. M. ELACK, West Liberty,
 JOS. R. VANMETER, Urbana,
 JOHN W. HERTT, Urbana, } *Managers.*

The officers for the past year, being the second year of its existence, were as follows, to wit:

WM. VANCE, President, Urbana.
SMITH MINTURN, Vice President, Urbana.
DANIEL SNYDER, Treasurer, Westville.
JOHN H. YOUNG, Secretary, Urbana.

JOHN H. BRYANT, Urbana, JAMES K. THOMPSON, Urbana, ARCHIBALD STEWART, Urbana, ELBA BURNHAM, Woodstock, JOSEPH R. VANMETER, Urbana,	} Managers.
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The list of paying members, for the present year, was 160; amount paid, \$160, up to the date of the fair of October 8, 1851.

The funds of the society, unexpended, during the years 1849-50, agreeably to the Treasurer's report, was \$60 67.

The amount paid into the treasury, during the current year, was, as before stated, \$160.

The list of premiums awarded at the fair, October 8, 1851, amounted to \$318.

There is one tract of escheated land in this county of 40 acres, remaining unsold, but the State is not in possession.

There has been paid into the county treasury, for permits to shows, the sum of \$80.

For the list of premiums awarded by our society, we annex a printed list as a part of this report; also report on field crops.

The election of officers for the coming year will take place on Saturday next, the 6th instant.

WILLIAM VANCE, *President.*

JOHN H. YOUNG, *Secretary.*

CHAMPAIGN COUNTY AGRICULTURAL SOCIETY.

Report of Premiums awarded on Wheat and Corn, November 1, 1851.

At an adjourned meeting of the committee on Grain and Field Crops, appointed by the Managers of the Champaign County Agricultural Society, held at Urbana, Nov. 1, 1851, the following members of said society made application for premiums, their statements and measurements being all sworn to as required by law, viz:

FOR THE PREMIUMS ON WHEAT.

James K. Thompson, 3 acres of wheat, averaging 39 bushels 30 lbs.

Joshua Buffington, 19 acres of wheat, averaging 32 bushels.

We therefore award the first premium to J. K. Thompson, \$5. Second, Joshua Buffington, \$3.

FOR THE PREMIUMS ON CORN.

John McAdams, 1 acre of corn, 131 bushels, 3 quarts, 1 pint.

Jacob Conklyn, 1 acre of corn, 119 bushels, 1 peck, three quarts.

James B. Dallas, 1 acre of corn, 117 bushels, 49 lbs.

Alexander Madden, 1 acre of corn, 106 bushels, 28 lbs.

We therefore award the first premium to John McAdams, \$5. Second premium, Jacob Conklyn, \$3. Diplomas to J. B. Dallas and Alex. Madden.

FOR THE PREMIUM ON OATS.

Hugh McDonald, 1 acre of oats, 73½ bushels. We therefore award the first premium to H. McDonald, \$5.

SAMUEL HUMES,
JAMES M. MAITLAND, } *Committee.*
JOSEPH C. BRAND, }

The members of the Society are notified that the meeting for the election of officers for the ensuing year, will be on the first Saturday in December next, at the Court House, in Urbana. A full attendance is requested, as it is proposed at that meeting to take some action with reference to the purchase or lease of permanent fair grounds near this town. It is probable that one or more public speakers will be present.

WILLIAM VANCE, *President.*

JOHN H. YOUNG, *Secretary.*

CLARK AND MADISON COUNTIES.

Clark and Madison County Agricultural Society.

The Clark and Madison Agricultural Society was organized by a meeting of the citizens of both counties, at South Charleston, on the 25th of April, 1846. On June 6th, 1846, a meeting was held at the same place, for the election of officers and the adoption of a constitution, when the following were chosen :

A. WADDLE, President.
 Dr. A. TOLAND, Vice President.
 JOSHUA HARRISON, Treasurer.
 CHARLES HARROLD, Secretary.

WILLIAM WHYTELY,	} Directors.
THOMAS SWAYNE,	
S. G. MOLER,	
B. B. BROWNING,	
JAMES RANKIN,	

The first fair was held at Springfield, on the 15th and 16th days of October, 1846.

The second annual meeting for the election of officers, was held at the same place as above, on June 5, 1847, when the following officers were elected :

A. WADDLE, President.
 A. TOLAND, Vice President.
 WM. HARROLD, Secretary.
 JOHN F. HARRISON, Treasurer.

R. COWLING,	} Directors.
J. F. CHENOWITH,	
T. SWAYNE,	
J. PAIGE,	
WM. WHITELY,	

The second annual exhibition was held at South Charleston, on the 7th and 8th days of October, 1847.

The third annual meeting was held at South Charleston, on June 3d, 1848, and the following election took place :

Dr. A. TOLAND, President.
 THOMAS SWAYNE, Vice President.
 WM. WHITELY, Secretary.
 J. F. HARRISON, Treasurer.

R. COWLING,	} Directors.
B. B. BROWNING,	
A. WADDLE,	
J. PEARCE,	
E. HEUSTON,	

The third exhibition was held at London, on the 12th and 13th days of October, 1848. The officers of the fourth year were:

A. TOLAND, President.
THOS. SWAYNE, Vice President.
WILLIAM WHITELY, Secretary.
J. F. HARRISON, Treasurer.

A. WADDLE,	} Directors.
A. WHITELY,	
M. BONNER,	
WILLIAM HARROLD,	
J. MITCHELL,	
R. COWLING,	
B. B. BROWNING,	

This Annual Fair was held at London, on the 4th and 5th of October, 1849.

At the fifth annual meeting for the election of officers, held at South Charleston, June 1, 1850, were chosen,

A. WADDLE, President.
WM HARROLD, Vice President.
J. F. HARRISON, Treasurer.
WM. WHITELY, Secretary.

JONATHAN FARRER,	} Directors.
A. WHITELY,	
R. COWLING,	
M. BONNER,	
J. HARRISON,	
T. SWAYNE,	
B. B. BROWNING,	
A. TOLAND,	
JAMES MITCHELL,	

The fifth annual exhibition was held at South Charleston, on the 17th and 18th days of October, 1850.

The sixth annual meeting for election of officers, was held at South Charleston, on June 7, 1851, when the following choice was made:

A. WADDLE, President.
JAMES MITCHELL, Vice President.
J. T. WARDEB, Secretary.
J. F. HARRISON, Treasurer.

WM. WHITELY,	} Directors.
J. FARRER,	
R. COWLING,	
B. B. BROWNING,	
WM HARROLD,	
A. TOLAND,	
J. HARRISON,	

At the second meeting of this year, the scale of premiums was increased to \$382. The entries were as follows:

Of Horses	91
Mules and Jacks	12
Cattle, comprising 108 head	71
Sheep, 37 exhibited	10
Hogs, 10 head	7
Poultry	3
Grain, only one entitled to premium	6
Roots, Fruits, &c.	2
Blacksmithing	2
Woolen Goods	2
Manufactured and finished Leather	8
Agricultural implements	8
Plows	6
Plowmen	2
Dairy products	6
Ladies Department	22
Flowers, &c.	2
Total entries	331

There were \$382 offered in 100 premiums, for which there were 331 entries, and premiums awarded to the amount of \$299.

There was a strong interest manifested over the three days continuance of the fair, which enabled the officers to comply with their duties in good time and order. So far, I think the experiment has proved successful. The number of horses exceeds that of last year, and show an improvement in that branch. Cattle, sheep and hogs were not so numerous as upon former years, but were certainly more select. Upon the third day, plows, &c., showed quite an improvement in manufactured articles, and visitors considered we stood well, in regard to implements, with any part of the State. In the ladies department we suffer for want of room; and here I would suggest the propriety of permanently locating a place of holding the fair at some central point, and having permanent fixtures.

The Corn to which the premium was awarded, was raised by Seth Harrison, on a loose black loam, covered with a stiff sod, which had not been turned for ten years. Plowed on 30th of March, 1851, well harrowed, furrowed out three feet each way, and planted on the 17th of May. The corn was harrowed once and plowed four times with shovel plow. When husked, one acre produced 62 barrels, one of which, when shelled, made 2 bushels of 56 lbs., making 124 bushels to the acre. Sworn to on Oct. 4, 1851, before David Morgan, J. P.

CHARLES P. HARRISON,
MILTON PACKER.

This was the only crop that could compete for the premium, others not having complied with the rules of the society.

Respectfully,

J. T. WARDER, *Secretary.*

scheated lands, none—for permits for shows, 1851 ----- \$20
R. MILLER, *Auditor.*

An exhibit of the Receipts and Expenditures of the Clark and Madison Agricultural Society, for the year 1851.

Balance remaining from last year	\$760 83
By subscription of members	122 00
By donations	23 00
Received from treasury of Clark county	99 00
Received from treasury of Madison county	46 00
	<hr/>
	\$550 83
Amount paid premiums	\$155 00
Amount paid premiums of 1850	4 00
Amount paid expenses of fair	23 20
Amount paid printing	10 50
	<hr/>
	\$192 70
Balance on hand	\$358 13
Of this sum there is due on premiums of 1850	\$25 00
Of 1851	149 00
	<hr/>
	\$174 00
Balance in treasury, after paying all demands	<hr/>
	184 13

JOHN T. HARRISON, *Treasurer.*

CLARK AND MADISON COUNTY FAIR.

The Clark and Madison Agricultural Society held their Annual Fair upon the three last days of last week, at South Charleston, in this county. Every thing went off to the satisfaction of the members, and has shown conclusively what the society has been doing, in years past, in the improvement of each branch of the exhibition.

The first day we had the largest entry of horses ever made; among which were some that stood the competition at Columbus very well.

Upon the second day, our show of cattle, sheep and hogs, was not quite so large as a year ago, but the animals were more select, and we had a good competition for nearly all the premiums offered.

Upon the third day, though very unpromising, the ladies soon filled the room selected for their part of the exhibition, with their handiwork. The plowing match elicited a great deal of interest, and as it was remarked upon the ground, it gave the judges something to do.

Officers for the Current Year.

ALEXANDER WADDLE, BENJ. B. BROWNING, WM. HARROLD, JOSHUA HARRISON,	}	Post Office address, South Charleston, Clark county.
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JAMES MITCHELL, JONATHAN FARRAR, RICHARD COWLING, A. TOLAND,	}	London, Madison county.
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J. T. WARDEE, WILLIAM WHITELY, J. F. HARRISON,	}	Springfield, Clark county.
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CLERMONT COUNTY.

*Third Annual Report of the President and Secretary of the Clermont County
Agricultural Society.*

This Society held its third annual fair near Slade's tavern, on the Ohio turnpike, on the 2d, 3d and 4th days of October, A. D. 1851, which proved to be very successful and gratifying, both to members and spectators, say about 6,000. Five acres of ground was leased for a number of years; said ground was enclosed with a tight board fence, eight feet high; large sheds have been erected for the exhibition of manufactured articles, fruits, flowers, &c., stables for the accommodation of horses and cattle, pens for hogs and sheep, all of which, made it convenient and pleasant for those who attended with articles and stock for exhibition. Owing to the advantages we have gained by having our fair grounds enclosed, we would advise those having the management of county societies to enclose their grounds and make ample preparation for stock, manufactured articles, &c. The cost may at first seem large, but it will pay, if properly managed. Ten cents for one person each day, was the admission fee for those not members; add to the receipts from this source, the amount collected from members and the county treasury, and we had a revenue of over \$800 00, a sum sufficient to pay all expenses, liberal premiums, and leave a balance in the treasury.

Our society numbers nearly three hundred members, a large increase on last year. The exhibition for the present year far exceeded the former ones, both in number and quality of articles and stock presented. The first day of the fair was

only intended for the entry of stock and articles, and general arrangements for the exhibition by the directors. The second day was exhibited live stock and farm implements.

The quantity of stock shown was more than double that of last year. The show of cattle exceeded the expectations of all, especially some Durhams, which would compete favorably with any cattle in the State.

The show of Horses would be very hard to excel, either in number or appearance.

The exhibition of Sheep was much better than last year, both in number and quality.

Hogs.—Not as many as should have been, but those shown were very fine.

Quite an improvement in the Poultry department.

The number of Farming Implements, not so large as was expected; the specimens very good, particularly plows.

This important department deserves, and is confidently expected, will receive greater attention from our mechanics in future.

The third day was devoted to the exhibition of domestic manufactures, vegetables, flowers, fruits, &c., all of which was as good as was expected, particularly domestic manufactures, the display of which was beautiful, and gave evidence of the excellent taste and industry of the ladies of our county.

At 2 o'clock P. M. of the third day, the large assembly was entertained by Philip B. Swing, Esq., by a short address, full of practical good sense. A great deal of interest was manifested by those in attendance. The effect produced by our fair was good—in every way encouraging to the friends of agriculture. Our society may safely be considered as resting on a firm foundation. Much good has been done, and no doubt, will increase yearly. Notwithstanding a number much less than our whole agricultural population are within the immediate influence of our society, yet we believe all are, to some extent, benefited by our operations; and the generous rivalry which is excited by the liberal premiums offered and promptly paid when awarded. One of the benefits produced by our society, is a visible change by many in the management of their farms and accommodation of stock, which is highly gratifying to the friends of agriculture.

We have no reliable data at hand from which we can form an estimate of the aggregate production of the county.

Principal Crops are Corn, Wheat, Oats, Rye and Potatoes. Average crop the present year, per acre, is: Corn, 35 bushels, price 28 to 30 cents; Wheat, 12 bushels, price 55 cts.; Oats, 35 bush., 20 cts.; hay, 1½ tons, \$8 to \$10; Potatoes, 60 bush., worth from 30 to 40 cents.

Agreeable to the request of the President of the State Board, we give the time of the organization of our Society and the officers, with their post office address, that have served in the successive years of its existence.

This society was organized in the month of June, A. D., 1849.

Officers for 1849—

THOMAS L. SHIELDS, Esq., President, Batavia.
 ANDREW COOMBS, Vice Pres't, Amelia.
 JOHN HANCOCK, Secretary, New Richmond.
 PHILLIP B. SWING, Esq., Treasurer, Batavia.

AARON FAGIN, Nicholasville P. O.	} Managers.
JOHN SHAW, New Richmond.	
CHARLES B. HUBER, Williamsburg.	
SAMUEL CORDRY, Olive Branch,	
S. R. S. WEST, do	

Officers for 1850—

S. R. S. WEST, President, Olive Branch.
 THOMAS HITCH, V. P., Ban'a'n.
 JOHN HANCOCK, Secretary, New Richmond.
 L. D. SALT, Treas'r, Williamsburg.

EMOR JOHNSTON, Mt. Carmel.	} Managers.
JOHN PAGE, Nicholasville.	
AARON FAGIN, do	
B. W. PEASE, Amelia.	
CHARLES ROBB, N. Richm'nd.	

Officers of the present year, 1851—

S. R. S. WEST, President, Olive Branch.
 JOHN FERGUSON, V. P., Amelia.
 JOHN HANCOCK, Sec'y, New Richmond.
 L. D. SALT, Treas'r, Williamsburg.

JOHN PAGE, Nicholasville.	} Managers.
AARON FAGIN, do	
L. C. MOORE, Batavia.	
JOHN BRANCH, Branch Hill P.O.	
ROBERT KYLE, Jr., Mt. Carmel.	

Enclosed you will find printed lists of premiums offered and awarded, also an abstract of the Treasurer's report for this year.

All of which, is respectfully submitted.

S. R. S. WEST,
President Clermont Co. Ag. Soc'y.

JOHN HANCOCK, Secretary.

*Treasurer's Report of the Clermont County Agricultural Society.***RECEIPTS.**

Amount on hand from last year.....	\$ 24 89
Received from members.....	295 00
from county Treasury.....	150 00
for gate fees.....	257 81
for privilege of selling refreshments.....	52 00
Donation to fence.....	52 25
Donation to be refunded.....	22 00
Amount received.....	<u>\$854 01</u>

EXPENSES.

Amount paid out in premiums.....	\$379 25
Amount paid out for fencing and sheds.....	310 50
Incidental expenses.....	97 14
	<u>\$786 89</u>
Balance in treasury.....	<u><u>\$67 12</u></u>

Dec. 2, 1851.

E. D SALT, Treasurer.

CLINTON COUNTY.*By ELI GASKILL, President, and ETHELBERT C. HIBBIN, Secretary.*

This society was organized in the year 1848, and, as their constitution, adopted the law and the rules prescribed by the Ohio State Board of Agriculture.

On the 16th and 17th of October, 1851, the society held its fourth annual fair at Wilmington. A printed list of the premiums and diplomas offered and awarded, and published in the Clinton Republican, is herewith presented, and also an abstract of the treasurer's account.

There was but one report from the committee on field crops, the statement in relation to which is herewith presented.

The main objects and efforts of this society are, to stimulate and encourage skill, industry and enterprise in the improvement of important domestic productions. It is believed that our efforts have been attended with a good degree of success. The increased general interest and approbation that is manifested at our annual fairs, as also the increase and improvement in the articles exhibited, evidences the utility of the institution, and warrants a continuance of efforts. The increase and improvement in fine stock, particularly, is very gratifying to all who properly appreciate their value.

Our society numbers about 180 members. It is in a prosperous and healthy condition, and its general utility admitted by all. At the close of our last exhibition, the following named gentlemen were elected officers for the ensuing year :

ISAAC HASLETT, President, Wilmington.
 E. L. LACY, Vice President, "
 JOSEPH WOOD, Secretary, "
 C. M. BOSWORTH, Treasurer, "

BOARD OF MANAGERS.

THOMAS D. AUSTIN, Esq., Clarksville.
 M. RAMBACH, Wilmington.
 P. H. VANDERWERT, "
 THOMAS McMILLAN, "
 ABRAHAM DOUGLASS, "

Our PRINCIPAL CROPS, which are, corn, wheat, hay and oats, were generally good this year, better than an average with the last two or three years.

CORN, which in the aggregate we consider our most valuable crop, we suppose would average 50 bushels per acre, and an unusually large crop planted. It is principally fed to stock on the farms where raised. The common price at present, on the farms, is about 20 cents per bushel. Our wheat crop, we suppose, would average 20 bushels per acre. Our principal market for wheat is at the Little Miami Mills and railroad depot. The price at present is about 60 cents per bushel.

HAY, which we consider next in importance, has yielded about $1\frac{1}{2}$ and 2 tons per acre, worth about three dollars per ton in the meadows, and is mostly consumed on the farms where grown.

The average yield of OATS is something like 50 bushels per acre, mostly fed to stock on the farms where grown. Price, say 16 cents per bushel.

Among our most valuable surplus products may be named our pork, wool, beef cattle, horses, sheep, &c., all of which we consider fair in quality and very considerable in quantity and value. We have only the auditor's books to learn our statistics. A very considerable amount of our surplus products consists of the minor articles, such as butter, eggs, cheese, poultry, &c., for the amount of which we have no data on which to base a calculation. Our principal market for these articles is at Cincinnati, and their prices variable.

We have a good soil, an intelligent, industrious, enterprising population, mainly engaged in agricultural pursuits, generally improving their farms and the manner of tilling them. Many of the improved implements of husbandry are in use, and approved of, such as the plow, the drill, the harvesting machine, the rake, the threshing machine, &c., all calculated to facilitate agricultural operations, and thereby promote its great interests.

We are not informed of any escheated lands in this county. The amount received by the county treasurer this year, for permits to shows, is eighty dollars.

C. M. Bosworth, Treasurer Clinton County Agricultural Fair,	Dr.
To cash received of M. Rambach, former Treasurer	\$162 75
To cash received of W. Crumby, Treasurer of Clinton county.....	94 68½
Amount	<u>\$257 43½</u>
	Cr.
By cash paid for diplomas.....	\$24 80
By cash paid on orders.....	16 00
By cash paid on premiums.....	116 50
	<u>\$157 30</u>
Balance in Treasurer's hands, Dec. 1st, 1851.....	100 13½
	<u>\$257 43½</u>

The above statement is a correct account of the finances of the Clinton County Agricultural Fair.

C. M. BOSWORTH, *Treasurer.*

Wilmington, Dec. 1, 1851.

COLUMBIANA COUNTY.

REPORT OF THE COLUMBIANA COUNTY AGRICULTURAL SOCIETY, FOR 1851.

To the State Board of Agriculture of Ohio:

This society was organized in March last, in accordance with the law of the State and regulations of the State Board.

The following officers were elected: President, JOHN FERRALL; Vice President, WILLIAM LONGSHORE; Secretary, LEONARD HANNA; Treasurer, JOHN McCLOYMONDS; Managers, E. B. HASTINGS, MILLARD HAINS, SAMUEL MARTIN, JOHN FLEMING, MOSES MENDENHALL.

In addition to the usual officers, this society has adopted an additional plan of organization, by encouraging the formation of township auxiliary societies, making their members members of the county society, and their Presidents Vice Presidents of the county society. By this plan it is hoped that a more diffuse and general interest and benefit will be secured. Until the townships organize and elect their officers, the county society appoints a Vice President for each township.

This society held its annual fair on the 15th and 16th days of October last.

The competitors for wheat failing to produce the requisite statement of manner and cost of production, no premiums were awarded on that article. The largest crop offered for premium, was 40½ bushels to the acre.

The first premium on corn was awarded to John N. Dixon, 128 bushels to the acre, on two acres. The following is his statement, made to the society, of the manner of cultivation:

"The ground on which I planted, is what I would call a white oak soil; as evidence of this, I might state that previous to plowing I removed forty-four white oak and two red oak stumps from two acres. I manured at the rate of forty-two horse loads of long manure to the acre; ploughed from 9 to 10 inches deep; harrowed well with a Geddes or winged harrow; struck out with a marker, three feet twenty-one inches exactly; planted on the 13th of May; left three stalks in a hill; twice hoed; twice dressed with a cultivator, and as often with a double shovel. Previous to planting, the seed was rolled in plaster, and about two spoonsful of unleached ashes dropped in each hill. Variety of corn planted—Hockbery or acclimated Gourd Seed. The characteristics of this variety are, small stalks (on this account will bear close planting), small cobs, deep grain, and early ripening. My crop is at the rate of one hundred and twenty-eight bushels to the acre. I believe I should have had twenty-five bushels more to the acre, if it had not been injured by the cut-worms and grubs, and afterwards, in July, by a storm which broke off a great many stalks. I present you with testimonial and affidavit of the gentlemen who measured the ground and crop. Respectfully, JOHN N. DIXON."

No applications for premiums on oats and barley. John Ferrall drew first premium on flax-seed, 86 bushels on 7 acres.

Statement by the President and Secretary.

This society is yet in its infancy, having been organized, as before stated, in March last. Owing to the peculiar organization of this society, as referred to in the notice of its organization, we are not able to give the exact number of its members at this time, having no report from some townships. The number that have become members of the county society direct, is 112. This number will doubtless be increased the coming year. The exhibition in October surpassed our expectations. We have great confidence that the next exhibition will be a decided improvement on the last. There is a growing interest felt in the county in the cause of agriculture.

The principal products of this county are, wheat, corn, oats, wool, pork, horses, cattle, sheep, grass and fruit.

Average yield of WHEAT last year, about twenty bushels to the acre. Aggregate, about 6 to 700,000 bushels. Marketed at several points in the county, on the Sandy and Beaver Canal, New Lisbon, and Hanover, Frederick & Spear's Mills. Average price this fall, 54 cents.

Average crop of CORN, about 35 to 40 bushels. Aggregate about 500,000 bushels; mostly consumed in the county. But little, if any, distilled, much to the credit of the county. Price this fall, 37½ cents.

Average crop of OATS, 35 bushels. Aggregate about 600,000 bushels. Large portion consumed in the county. Some shipped to Pittsburgh and Cleveland. Price about 25 cents per bushel.

WOOL.—This forms one of the principal articles of export from the county. Aggregate, 4 to 500,000 pounds. Average price last season, 40 cents. Quality

constantly improving, and must soon take rank with the first in the State, if it does not now occupy that position.

PORK.—Aggregate of pork for exportation in the county, as estimated, 5 to 600,000 pounds. Average price this fall, from 4 to 4½.

HORSES.—Difficult to give the number annually sold, to be driven out of the county, but they form a very respectable item. The high price at which they have been sold for some years past, is giving a new impetus to this branch of husbandry, and more attention is paid to improved stock.

CATTLE do not form a large item in this county; but little more is done than to provide for home consumption. Some improvement is noticed in the breed of cattle, and much more is anticipated from the already apparent effects of the exhibition in October last.

SHEEP.—Large numbers of sheep are annually driven east from this county. The present high price has for the time stayed the slaughter for pelts and tallow.

GRASS.—The crop last harvest was better than the preceding one, and generally well secured. Average yield, about 1½ tons to the acre.

FRUIT.—The crop of apples was almost a failure this year. Usually a large export of this article, both in green and dried state. Other fruits cultivated, but not much exported.

JOHN FERRALL, *President.*

LEONARD HANNA, *Secretary.*

Treasurer's Report.

John McClymonds, Treasurer of the Columbiana County Agricultural Society, in account with said society:

DR. To cash received from F. A. Blocksom, Esq., former Treasurer of the society	\$70 00
To cash received from members of the society, during the present year	96 07
To cash in the county treasury	96 07
Total receipts during the year 1851	<u>\$262 14</u>
CR. By amount paid out on orders of the President and Secretary	75 25
Balance in the hands of the Treasurer, Dec. 24th, 1851 ..	<u><u>\$186 89</u></u>

JOHN MCCLYMONDS, *Treasurer.*

New Lisbon, Dec. 24, 1851.

COSHOCTON COUNTY.

COSHOCTON COUNTY, O.,
December 1st, 1851.

To the Ohio State Board of Agriculture :

The undersigned, President of the Coshocton County Agricultural Society, has the honor herewith to transmit the first annual report of our society.

REPORTS ON CROPS FOR 1851.

WHEAT.—Usual average product of wheat, 15 bushels per acre. Approved varieties, blue-stem, Mediterranean, red-chaff, and bearded. As our society is yet in its infancy, there has not been time sufficient to collect that amount of information relative to wheat that could be obtained. Our county forms part of the great "Wheat Belt" of Ohio, and if correctly reported, it would be somewhat interesting.

CORN.—Average yield on bottom and upland, fifty bushels per acre. This year's crop is short, in consequence of the drouth. Varieties various: large yellow and large white preferred.

OATS.—Average yield in good seasons, forty bushels per acre; this year, perhaps, forty-five or fifty bushels per acre. Side oats preferred.

POTATOES.—Average yield in good seasons, one hundred and fifty bushels per acre. Varieties mostly approved, are pink-eyes, blue neshannocks, and Baltimore blues. This year's crop very light. It is thought that the rot may be prevented, by planting early, in rich, sandy soil.

GRASS.—Most approved for hay, are timothy and red-top; clover is in general use, but chiefly as a fertilizing crop and pasture. Average per acre, one and a half tons.

PORK.—We have any quantity of swine. Various breeds are preferred by various persons. The Bedford, China, and Berkshire, all have their admirers.

SHEEP.—There is quite an effort on the part of our farmers to improve, both in number and quality of sheep. Present quality, from full-blooded down to common sheep. Average price of common wool, this year, $37\frac{1}{2}$ cents per pound. Merino preferred for wool, South-down for mutton.

HORSES.—The number of horses raised for export is very small;—average value is \$75 per head.

BEEF CATTLE.—The number of beef cattle is considerable, and in quality they will compare favorably with the stock of our neighboring counties. An effort is now being made to introduce the Durham, which will soon supersede the old native stock.

MINERALS.—We have beds of iron, and any quantity of the best coal in the
e.

MILLS.—A large number of flouring mills, and saw mills in abundance, carding machines, iron foundry, pottery, &c.

IMPLEMENTS.—Wheat drills, reapers, rollers, and thresher and separator, in use.

IMPROVEMENTS.—Many of our farmers are sowing lime and plaster, which yields a ready and rich reward.

C. F. SANGSTER, *President.*

W. H. VICKERS, *Cor. Sec'y.*

Treasurer's Report of the Coshocton County Agricultural Society.

Amount received from subscribers, &c.....	\$87 73
Do do County Treasurer	50 00
	<hr/>
	\$137 73
aid for premiums, printing, incidental expenses, &c.....	135 06
	<hr/>
December 1, 1851, amount in treasury.....	\$2 67
	<hr/>

S. KETCHUM,

Treasurer of Coshocton County Agricultural Society.

Escheated lands, none. Money for the O. S. Board of Agriculture, from shows, o treasury, \$28.

CRAWFORD COUNTY.

1. **PRINCIPAL CROPS.**—Wheat, corn, hay, oats, and clover-seed.

2. **WHEAT.**—The average per acre of 1851, I think, will not exceed fifteen bushels. A number of varieties are grown: it is difficult to say which renders the best satisfaction. A preference appears to be given to a variety introduced into the county by Mr. George Lauck, termed, with us, White Blue stem, from its ripening early and producing a light growth of straw; it also appears better adapted to most kinds of soil than any other. The wheat crop was considerably injured by a small yellow weevil that committed great depredations on our crop of 1849; no other cause operated against the crop to any extent. Many of our farmers are experimenting on the tilling of this staple, and more pains are being taken to get their wheat sown in good time and in good order. The probable amount raised in this county will not vary much from three hundred and ten thousand bushels, estimating the yield about three-fourths of that of 1850.

3. **CORN.**—The amount raised this year will not vary much from that of last year, which, according to our assessor's report, is rising of five hundred thousand bushels, and averages about thirty-two bushels per acre.

4. **OATS.**—Average yield per acre, about thirty-five bushels. The destruction by grasshoppers was far less extensive than last year.

5. **BARLEY AND RYE.**—No demand for the growing of these grains to any extent. The small quantities raised are purchased by the distillers and brewers.

6. **GRASS AND HAY.**—The crop is rather more than an average, the past season. Timothy and clover, mixed, are the most approved.

7. **ROOT CROPS.**—The potato crop was not injured to the same extent that it has been for the few past years. No other root crops raised to any extent.

8. **FRUIT.**—Almost a total failure the past season. Great pains are taking to introduce good varieties, as we have a good fruit region, and but seldom fail to have an abundance of apples; plums and peaches do not do as well; pears yield well.

9. **SEEDS.**—The crop of clover seed is hardly an average, yet much better than last year. The attention of our farmers to the stock business, supersedes the raising of clover and timothy seed; flax seed is not raised to any extent.

10. **OTHER CROPS.**—Small quantities of broom corn and beans are raised here.

11. **DAIRY PRODUCTS.**—No cheese manufactured for shipping, not even enough for home consumption. The aggregate amount of butter shipped, will fall short of 1850; I think, from what information I can gather, that the amount will not exceed 150,000 pounds.

12. **SHEEP AND WOOL.**—There were, at the time of the assessment, nearly seventy thousand sheep in this county. We can safely add the increase to that number: those brought to this county will equal those taken out; say the increase to be 20,000, which would make, in all, 90,000 head. The assessor's list shows an increase of over 14,000 over 1850. I think we can safely estimate the number of pounds of wool purchased by persons in our county at 300,000 pounds, as large quantities from Marion and Wyandot counties find a market with us. The price paid will average about thirty-eight cents per pound. Our wool-growers seem determined to grow as good a quality of wool as can be found in the State. Time and money are but secondary matters, with many, in effecting this object.

13. **PORK.**—I find the number of hogs returned by the assessors, for taxation, nearly one thousand less than last year. Few hogs have been slaughtered and packed here. They have, principally, been bought and drove to Cleveland and other Lake shore points. Some interest is taken in the improvement of breeds, which is needed.

14. **BEEF.**—The assessor's returns show a small increase over last year. Considerable feeling is manifested by many in the improvement of this much neglected animal. I think a few years will make a material change in the appearance of our cattle. Large numbers are annually brought here and pastured during the summer season.

15. **HORSES.**—The number assessed shows a small increase over last year. I do not know of any material improvement in the breeds. I must say, an improvement is needed; yet many very fine horses are sold to eastern buyers yearly. No mules raised in the county, to my knowledge.

16. **IMPLEMENTS.**—Some of our farmers manifest considerable interest in procuring the most approved grain-drills; and reapers are owned and have been in use in the county for several years past, and have given general satisfaction. But few, if any, subsoil plows are used here. Good steel plows, corn drills, cultivators, &c., are in general use.

17. **OTHER IMPROVEMENTS.**—No improvements or experiments of any importance, to my knowledge, other than the gradual advancement manifested throughout the State.

18. **MINERALS.**—There are no minerals known to exist in our county, excepting small quantities of iron ore, which not considered worth working.

19. **MILLS.**—There are some twelve saw-mills in the county, most of which are propelled by steam, and are doing a good business. Our flouring mills are doing a moderate business. The streams are not permanent, and the majority have steam power attached.

20. **PUBLIC SPOWS.**—The amount collected for the agricultural fund is twenty dollars. No escheated lands known.

A. FAILOR, Sec'ty.

At an election held on the first Saturday in January, 1852, the following persons were elected as officers, for the ensuing year, (with their post office addresses:)

R. W. MUSGRAVE, President, Sulphur Springs.		
S. S. CALDWELL, Vice President, Bucyrus, Crawford Co.		
SAMUEL MYERS, Treasurer,	do	do
A. FAILOR, Secretary,	do	do

AMES LEWIS, Bucyrus, Crawford Co.	}	Managers.
JACOB MOLLENKOFF, do		
WM. ROBINSON, do		
GEO. CUMMINS, DeKalb, Crawford Co.		
R. MORSE, Tyro, do		

*Report of the Crawford County Agricultural Society to the Ohio State Board of
Agriculture for the year 1851.*

This Society held its fourth annual Fair on the 23d and 24th of October last. The weather was beautiful for the season. Our people, for once, appeared duly to appreciate their own best interests, by making a grand move in this laudable enterprise. From the number of persons present, together with the interest manifested by all, we incline to the opinion that a new era is about to dawn upon the agricultural interest of this county.

The show of horses, cattle, and sheep, was much larger than at any former Fair. An improvement in our horses is still much needed. There has been considerable attention paid to the improvement of the breed of cattle, as could be seen by comparing the cattle of this Fair with former ones. The wool growers of this county

appear to be deeply interested in the improvement of their sheep. We had on exhibition the fine formed heavy fleeced French Merino, the fine woolled Saxon, the Liecestershire, the South Down, together with the most improved stock from different sections of this and eastern States.

The show of hogs was not large, but exhibited an interest in this useful animal. The number of manufactured articles and agricultural implements on exhibition did credit to the Society. The display of the dairy was not as good as we anticipated; our farmers have not as yet devoted much of their attention to this subject. Owing to the unfruitfulness of the past season, few apples were offered; yet, those entered were of various and fine qualities. Some choice varieties of Green-house plants were on exhibition, which added much to the beauty of the show. Upon the whole, we have a good reason to believe, from the interest manifested at the Fair, and the good feeling now prevalent, that the Fair of 1852 will far exceed this.

The Society numbers 92 members, which is nearly double the number of last year. The amount awarded by the Society for premiums was 163³/₄ dollars, some 46 of which is awarded in subscription to the different agricultural papers published in the State.

Annexed you will find an abstract of the Treasurer's account. All of which is respectfully submitted.

A. FAILOR, *Secretary.*

Abstract of the Treasurer's Account.

Amount on hand from 1850	\$91 50
Amount Received from members on subscription	92 00
“ “ from County Treasurer	92 00
“ “ on subscription for preparing the Fair grounds	29 25
	<hr/>
	\$304 75
Amount paid for premiums	\$117 00
“ “ “ agricultural papers	46 34
“ “ “ work, &c., at Fair grounds	28 33
“ “ “ printing bills	11 00
“ “ A. Failor, Sec.	5 00
	<hr/>
	207 67
	<hr/>
Balance in Treasury	\$97 08
	<hr/>

SAMUEL MYERS, *Treas. C. C. Ag. Society.*

CORN CROP RAISED BY C. KELLER.

Measurement of ground, 21¹/₂ rods wide and 22¹/₂ long, containing three acres, was in corn the previous year. Ploughed once, then harrowed—furrowed out both ways, covered with hoes, cultivated once, and plowed twice.

Cost of Culture.

	Dr.
To 2 days' plowing \$1,50	\$3 00
To 1 day's harrowing \$1,50	1 50
To $\frac{1}{2}$ day's marking out	75
To planting	1 50
To cultivating	75
To first plowing one round and dressing	1 50
To second plowing two rounds and dressing	2 25
	<hr/>
	\$11 25
	Cr.
By 265 bushels Corn a $31\frac{1}{2}$	\$82 81
	<hr/>
Net profits	\$71 56

The above was properly vouched for according to law.

CUYAHOGA COUNTY.

BY A. A. JEWETT.

1. **PRINCIPAL CROPS.**—Wheat, Corn, Rye, Oats, Hay, Potatoes, &c., &c.

2. **WHEAT.**—The number of acres cultivated the past year, was 6,711. No. of bushels, 97,966. This is the statistical report of last year's crop; the present year is much larger, some fields yielding as much as 40 bushels to the acre. I know of one man who sowed $1\frac{1}{2}$ bushels of wheat, and reaped 70. The common mode of sowing, is to plow once and harrow it in. Generally sown after oats or corn. I think the most sure way is to summer-fallow, and sow early.

3. **CORN.**—Number of acres raised the past year in the county, 12,018; number of bushels, 396,922. It will be seen from the above, that a far larger amount of corn is raised than that of wheat. The kinds that are grown is mostly gourd seed, or a mixture, though there are some eastern men who still think that there is no such corn as the little small 8 roed, which is very much against their interest to raise.

4. **RYE.**—There is but a small quantity raised in the county; the average yield some 15 bushels. I know of one man who sowed $\frac{1}{2}$ bushel, and received nearly 20 bushels.

5. **OATS.**—No statistical account was taken, on which to base a report of the quantity raised the present year. The probable average, 40 bushels per acre. The number of acres sown must be large, as it is a very general crop raised here.

6. **HAY.**—The hay crop this year was far better than that of last—probable average from $1\frac{1}{2}$ to 2 tons to the acre. It was selling in Cleveland, last of October, for \$10 per ton. The principal kinds are timothy and clover.

7. **ROOT CROPS.**—Potatoes average per acre 100 bushels. The rot has made but very little havoc this year. There are some turnips raised here, and to much profit, yielding some 400 bushels to the acre.

8. **FRUIT.**—There is no section of the State better adapted to the raising of fruit, than that lying along the lake shore. The past season, however, the quantity of fruit has been very small, yet it substantially proves that we are more sure of a crop than any other portion of the State. The only fruit raised, with a very few exceptions, was in the immediate vicinity of the lake. Apples are selling at from 8 to 10 shillings per bushel. Peaches sold at from 2 to 4 dollars, and some few as high as 6 dollars per bushel. There was one peach orchard some four miles from Cleveland, on the lake shore, that yielded near 2,000 bushels; and others, in the same proportion.

The crop of pears, in general, the present season, was very small, and the same may be said of plums.

Cherries.—There are but few counties that excel this, in this kind of fruit. There are some of the finest orchards here, that can be found in any of the States—one in which there are over a hundred large sized bearing trees. The rose hogs have made a sad havoc among them for the past few years.

Strawberries and Raspberries.—The crop was very good. The price at which strawberries sold was from 10 to 50 cents a quart; and that of raspberries from 15 to 25 cents a quart. The exportation of peaches and strawberries is quite large.

There are between 100 and 200 acres of nurseries, where can be found almost any variety of fruit or ornamental trees or shrubs. There seems to be an increased interest in the raising of fruit in all the varieties.

9. **SEEDS.**—There is a limited quantity of seeds raised in the county, yet there is a large amount shipped from Cleveland, both east and west.

10. **DAIRY PRODUCTS.**—The number of regular dairies kept in this county, is small, compared with other counties east. It is the experience of those engaged in the dairy business, that they realize much more than they did when they were engaged in raising grain. The wholesale price of cheese in Cleveland, is from $5\frac{1}{2}$ to 6 cents. The retail price of butter, is from 14 to 18 cents. Many cows are kept in and near the city of Cleveland, and the milk and cream are sold in the city. There has been but little attention paid to the raising of any breed of cows that are noted for their milk qualities, yet there can be found here some of the finest cows.

11. **HORSES.**—The number of horses in the county is 7,689, and valued at \$288,245. Few are raised here, yet there are some of the very finest that can be found any where.

12. **CATTLE.**—The number of cattle in the county is 18,922, and valued at \$233,483. The quantity imported and slaughtered for the eastern market, is large—prices of beef per hundred, is 3½ to 4 dollars.

13. **SHEEP.**—There are 59,056 sheep, valued at \$32,105. Price of wool in the early part of the season, from 40 to 50 cents per lb. Large quantities have been slaughtered here, principally for their tallow and pelts.

14. **HOGS.**—This part of the State raises but little pork. The number of hogs is 8,400, and valued at \$15,619. Large quantities are driven, and brought in on the railroad, and shipped east, to be slaughtered and sold fresh—the price per hundred \$5.

15. **CARRIAGES.**—The number of carriages in the county, is 1,619, valued at \$71,870, and many of them very superior. There is some of the best manufacturing establishments that can be found anywhere.

16. **WATCHES.**—The number of watches in the county is 2,156, valued at \$41,419.

17. The total amount of personal property within the county, is \$2,705,859.

18. **IMPLEMENTS.**—There seems to be a great demand for better farming tools. I feel very much gratified to state, that within the past year there has been established a large Agricultural Warehouse, where can be found any thing that a man may fancy, or his business may require, in the shape of tools to work with, from the smallest hand plow to the large and substantial plow for grubbing and turning the most hardy pieces of soil.

19. **OTHER IMPROVEMENTS.**—It would not be expected that we should not be among the progressive ones in this age of steam and lightning, while the cry is onward and upward in the scale of progressive improvement. There is a very marked improvement in every part of the county, in the way of better cattle, horses, sheep, hogs, &c., as also in buildings, implements, carriages, and in fact in everything. The very marked increase in business the past summer, tells of the effects of the railroads, of which there are three in operation, and one more in progress of construction, which is expected to be in operation early the coming year.

Another improvement it gives me great pleasure to speak of, is the erection of a Collegiate Institution for the people. The building is now in progress of construction, situated about a mile from the main or business part of the city of Cleveland, upon the west side of the Cuyahoga river, on a rising spot of ground, where it commands a full view of the city. The most beautiful part of it all, is the fact that a pupil may go there and study what he wishes, and not merely to study, but is to have the science of agriculture, surveying, &c., taught practically. There is a tract of 70 acres of land on which to practice. The best mode of cultivation and surveying is to be taught in the field, instead of the study alone. The intention of the Directors is to spare no pains to make it the very best place that can be found, to acquire a practical education.

20. The number of members belonging to the Cuyahoga County Agricultural society, is 312. The progress of the society is decidedly good, and it is generally believed that they are very useful in the way of stimulating persons to try which shall have the best of any thing they may have, or can get, to bring forward for exhibition.

The society has existed in its present shape, five years. The first officers were—

President—JOHN A. ACKLEY, of Parma;
Treasurer—AHAB MERCHANT, of East Cleveland;
Secretary—E. T. STURTEVANT, of East Cleveland.

Officers for the year 1847—

President—E. M. BARTLET, of Brecksville;
Treasurer—JOHN STAIR, of Cleveland;
Secretary—E. T. STURTEVANT, East Cleveland.

Officers for the year 1848—

President—THEODORE BRECK, of Brecksville;
Treasurer—JOHN STAIR, of Cleveland;
Secretary—A. A. JEWETT, of Newburgh, P. O. Address, Cleveland.

Officers for the year 1849 —

President—A. L. MCCURDY, of Newburgh;
Vice President—WM. WEST, of Euclid;
Treasurer—JOHN STAIR, of Cleveland;
Secretary—F. R. ELLIOTT, of Cleveland.

EXECUTIVE COMMITTEE.

JOHN WILCOX, Euclid;	EVERETT HOLLEY, Warrensville;
JOSEPH LENTZ, Meryfield;	JOHN A. ACKLEY, Parma;
ROBERT TAIT, Bedford.	

Officers for the year 1850, as elected —

President—J. P. KIRTLAND, Rockport;
Vice President—A. SHEERWIN, East Cleveland;
Treasurer—JOHN STAIR, Cleveland;
Secretary—G. B. MERWIN, Rockport.

EXECUTIVE COMMITTEE.

A. A. JEWETT, Newburgh;	A. MERCHANT, East Cleveland;
JOHN A. ACKLEY, Parma;	WM. WEST, Euclid;
RANSOM BENEDICT, Bedford.	

J. P. KIRTLAND, resigned, and BUCKLEY STEDMAN, of Cleveland, was elected President. Also, a letter from G. B. MERWIN, of Rockport, resigning the office of Secretary, was received, and in his place, CHARLES WHITTLESY was elected to the Secretaryship.

Officers for the year 1851 —

President—BUCKLEY STEDMAN, of Cleveland;
Vice President—AHAZ MERCHANT, of East Cleveland;
Treasurer—JOHN STAIR, of Cleveland;
Secretary—A. A. JEWETT, of Newburgh.

EXECUTIVE COMMITTEE.

JOHN WALWORTH,
 A. MCINTOSH,

A. SHERWIN,
 J. M. COGSWELL.

JNO. COLE,

Report of the Treasurer of the Cuyahoga County Agricultural Society.

J. STAIR, in account with

Cuyahoga County Agricultural Society,

Dr.

To balance in hands of Treasurer from 1850.....	\$31 12	
To amount received as subscriptions from members	324 43	
To amount received from County Treasurer.....	200 00	
To amount received for sale of lumber.....	153 56	
To amount received for rent of stalls on Fair ground	12 00	
To amount received of B. Stedman, for hay.....	6 26	
		<hr/>
		\$727 38

Cr.

By amount paid for premiums.....	\$291 00	
By amount paid C. C. Butts, for lumber.....	192 00	
By amount paid Smead & Cowles for printing.....	36 50	
By amount paid M. C. Younglove & Co., for books.....	27 95	
By amount paid expenses at Fair grounds.....	173 96	
By amount paid for papers as premiums.....	4 75	
By balance in Treasurer's hand.....	1 20	
		<hr/>
		\$727 38

GEO. WHITE LAW, } Committee.
 A. A. JEWETT. }

CLEVELAND, December 1, 1851.

ADDRESS BEFORE THE CUYAHOGA COUNTY AGRICULTURAL SOCIETY.

BY DR. EBER W. HUBBARD, OF ELYRIA.

Mr. President and Gentlemen of the C. A. Society: In attempting a compliance with your invitation, permit me to assure you that there is no subject upon which it would afford me greater pleasure to address you than that of Agriculture. It is the great art that sustains all others. It is the vast machine on which human life and its multiform operations depend. It is the munificent dispenser of human happiness, giving to all a portion in due season. It is the response of Divinity to the exertions of man, fulfilling the promise of "seed-time and harvest," by speaking out in the abundant productions of the earth, yielding supplies and giving promise for time to come.

Every thing connected with agriculture is rich in interest to mankind. Are we fond of things venerable on account of antiquity? then our subject reaches as far back along the vista of the past as history can trace the existence of men. Do we admire things in proportion to their utility? then agriculture is second to no department of human industry.

Agriculture had a divine origin. From the only authentic history of the early inhabitants of the earth, we learn that the "Lord God planted a garden." This garden was established on a liberal scale, embracing, probably, both agriculture and horticulture, for it yielded "every tree that is pleasant to the sight and good for food."

On what day, consecutively, or geologically, "thorns and thistles" were brought forth, I shall leave to the antiquarian to decide; but in regard to identity, it would not be very unnatural to suppose that among the offspring of the "fall," were the cactus of the South, and the Canada thistle of the North.

It would be a matter of very little consequence to trace the fabulous origin of agriculture to the Egyptian Osiris; to Ceres and Triptolemus, of the Greeks, or to Janus of the Latins. What it now is, and what it may be hereafter, will be briefly alluded to: yet the present is, perhaps, an unfortunate period to address a popular assembly on the subject of agriculture. We live in an age of science—an age of wonders. As farmers, we are daily witnessing the astounding effects of the application of science in the progressive movements of the world. Agriculture, too long regarded as an art, had been plodding along, with only an occasional jog from science, until the present century. Since that time it has received an impulse too potent to pass unnoticed, by Liebig, Johnston, Stephens, Norton, Dana, Buel and others.

Much, indeed, may be expected from science, but its general application to agriculture must be gradual. There are prejudices to overcome—old and venerated paths that must be abandoned, and a new order of things established. Science comes to us cumbered with a flood of terms, which, unexplained, fall upon the ear

like the unmeaning jargon of the wanderers from the plains of Shinar after their dispersion from the tower of Babel. Yet, with all these disadvantages, science must ultimately prevail. No earthly power can impede its onward march. The time will yet arrive when farmers will listen with profound interest to the minute details of chemical investigations in their application to agriculture.

We believe the time has passed, in which it was deemed unnecessary for a farmer to have an education — when all the educated young men must be either ministers, lawyers, doctors or clerks.

Science appertains to agriculture, as much, and perhaps more, than to most other branches of business. Farmers should be familiar with the results of chemical analyses, notwithstanding the details of the science belong to the laboratory of the practical chemist. There are thousands of chemical changes going on in the active operations around us, and they pass unnoticed because they are of daily occurrence. They have ceased to attract attention in proportion as we have withheld investigation. This is true in every instance of vegetation; from the germ in its incipient developement, to the maturity of the plant, in which the fruit or seed is perfected.

This fact is equally demonstrative in the kitchen. "A little leaven leaveneth the whole lump," is a plain practical fact, known for ages; but in what manner the result is produced, what chemical changes take place, and what new compounds are formed, have not, in all instances, been fully understood.

In various culinary and domestic operations, a little alkali is added to correct acidity. How is this effected? By the chemical union of the alkali with the acid. The fact of change is known, and the result is just what was anticipated; yet it may not have entered into the mind of the operator, that a change strictly chemical had neutralized the acid and produced a new constituent in the compound.

By these plain and familiar examples, I wish to enforce the necessity of bringing science and agriculture together in an acknowledged relationship; to show that there is a union between science and practical farming, which cannot be dissolved. They now stand indissolubly corrected, and must ever remain so, whether the cultivator of the soil be ignorant of the relationship or not. His want of knowledge does not prevent their acting conjointly. So in operative mechanics, and other departments of industry, facts may exist, and the practical results of the operation of the artist be perfect, without a knowledge of the principles by which they are brought about. A right angle may be made in the construction of a wall or building, by three lines measuring 6, 8, and 10 feet, without reflection on the part of the mechanic, that geometry had long ago demonstrated the truth of the problem, that in every right angle triangle, the square of the hypotenuse is equal to the square of the other two sides.

It is a matter of some importance to know, at the present time, whether the minds of men can be brought to investigate with facts and figures and chemistry, the old and staid subject of agriculture.

The world is excited and feverish ; it has stood "on tip-toe" these many years. We, in this goodly republican land, have not remained inactive. We have been on the *qui vive*, and not a whit behind the rest of the world in speculations, in conquests, in golden dreams and realities, in railroads and telegraphs. Nevertheless, is there any good reason why a farmer should not know his business ?

If science be the lever by which the business operations of the world are now propelled, why not bring it effectually to the aid of agriculture ? Strictly, so much of science as will enable the farmer to proceed understandingly, cannot be objectionable. It is true, no general rule can be laid down for the government or direction of the farming interest. Every man must be left to judge for himself of the adaptation of his soil to particular crops, and particular modes of cultivation. Rotation, or a succession of different crops, has been customary, perhaps for ages. It still continues to be a practice among farmers, for one of the best reasons in the world, namely ; they obtain better crops by it. But why so ? Because the same elements, in the same proportions, do not enter into the composition of all crops. Continual cropping with one species of grain, may exhaust the soil of the elements that enter into the composition of that particular species ; and yet the same soil may be rich in the elements of nutrition required in the growth of some other crop equally valuable. Some plants draw the greater proportion of their sustenance from the atmosphere and from water. The soils on which they grow may be enriched by the process of vegetation. This you will observe to be the case in the sphagnum or peat swamps throughout the State. Others lay a heavy contribution on the productive elements of the soil, and the result is premature exhaustion.

So much of chemical investigation is necessary as to ascertain what elements each crop draws from the soil ; what amount of exhaustion is produced, and how to supply the loss, with the proper elements in such a condition that they can be assimilated and appropriated as food for the growing crop. The great desideratum of the agriculturalist, is to know how to obtain the largest amount of the products of the soil from a given area of land ; to ascertain how the greatest amount of profit can be made with the least expense. Can science lead him to the attainment of this knowledge ? If so, it is worthy of his consideration.

No one can doubt the power of chemistry to determine the elementary principles of bodies, whether organic or inorganic. That it will clearly demonstrate what elements and in what proportion they enter into the constitution of plants, whether these same elements are in the soil, or can be supplied, in part, by the atmosphere and water.

Let us suppose, for example, that a farmer commences a series of experiments, to prepare a field for the production of a crop which, in its present condition, it will not produce. This presents a fair case to determine whether science can render him any assistance or not. The first year he puts on one kind of manure and fails ; the second year another kind of fertilizing agent and fails ; and so on to the third year. Now he takes a specimen of the soil, and a specimen of the kind of

grain he has endeavored to cultivate, and places them in the hands of Professor St. Johns for analysis. He analyzes the soil separately, and the grain, (including the straw,) separately. One material constituent of the grain is wanting in the soil. The farmer is told what that is and how to supply it. The next year he reaps an abundant harvest. Now which is the cheapest, a little assistance from science, or the loss of the three years labor?

To trace the history and effects of the various fertilizing agents that now form so important a part of systematic husbandry, would lead me into details wholly unsuited to the present occasion: yet their properties, nature and composition, should be well understood. No cultivator of the soil, at the present day, should be wholly unacquainted with the compounds of nitrogen and of the phosphates. A description of all these agents may be found in the works to which I have alluded, and also in the agricultural periodicals of the day. And here, perhaps, as appropriately as at any other point, allow me to call your attention to the advantages you will derive, as farmers, from works on agriculture. As I have always a partiality for my own country and State, let me recommend to your consideration the "Western Agriculturist," published at Columbus, as a work invaluable to those who cultivate their soil.

There is an opinion somewhat prevalent, that land should be permitted, occasionally, to rest, in order to render it productive. This idea of repose was, probably, borrowed from the animal kingdom, without reflecting that there is a wide difference between the constitution of organic and inorganic bodies. A comparison, in this respect, between the animal system and the soil, cannot be strictly correct, since one is the loss of functional power, from over-exertion, while the other is a loss of the elements necessary to vegetable production. Rest may give tone to the animal system, but it requires the appropriate fertilizing agents to restore vitality to the exhausted soil.

There is no doubt, however, but what time and frequent plowing, in what are termed fallow grounds, are of great utility. Plowing exposes a larger surface and a greater number of particles of the soil, to the influence of the atmosphere, to the action of oxygen and carbonic acid, and to the changes and disintegration produced by rain and variations of temperature. These processes are admirably adapted to increase the productiveness of the soil. This is exemplified in the summer fallow for wheat, by which the soil becomes fitted for assimilation as food to sustain vegetable life. Vegetable production may be continued through a long series of years without any intermission, if proper attention and skill are observed on the part of the cultivator of the soil.

Among the subjects to which I can appropriately call your attention at this time, is the destruction of certain plants and shrubs. Some of these are poisonous — others are injurious to sheep, cattle and horses — whilst others, by occupying too much space on the farm, or in the garden, check the growth of vegetation, and materially lessen the annual value of the crops. Some knowledge of botany is neces-

sary to the farmer, to render the destruction of these plants complete. A little research into the history and habits of plants may guide him more economically as to the proper time of cutting, and the amount of labor required, than an indiscriminate warfare upon weeds in general. As a general rule, the best time for cutting such plants as you wish to destroy, is about the flowering period : or, so early in the season that the seed cannot ripen, and yet so late that a second growth cannot come to maturity. Annual plants may be destroyed in one year, biennial in two years, and perennial, generally, in three, often in less time.

But the question arises, would you make botanists of farmers? I answer, yes! decidedly and practically. The best botanist west of the Alleghany Mountains is an Ohio farmer. If you would have your sons and daughters understand and appreciate botany, let them leave the sickly atmosphere of the school room, where there is little else than a mechanical recitation of petals, pistils and peduncles, and go into the open fields of nature—the meadows and the forests—and there examine the bud, the blossom, and the ripening fruit. There is no *Hortus Siccus*, no dried or withered specimen in the garden of nature, but reality in her surpassing loveliness. Who is to bring into your recitation room a characteristic specimen of the majestic oak, or the splendid magnolia? The former puts forth its blossoms in early spring, with the expanding leaves, but the latter, at a more congenial season, spreads forth a world of inflorescence, a vast floral arbor of unequalled beauty and magnificence.

The most common poisonous plants, some of which, occasionally, prove fatal, are the

Stramonium,	Datura Stramonium.
Common Nightshade,	Solanum Nigrum.
Water Hemlock,	Cicuta Maculata.
Poison Hemlock,	Conium Maculatum.
Poison Ivy,	Rhus Toxicodendron.
Poison Sumach,	Rhus Venenata.

The two first of these plants are annual, and require but once cropping to destroy them. The others are perennial, and not as easily subdued.

The plants that I would enumerate as injurious to sheep, horses and cattle, particularly the former, are—

Hound's tongue,	Cynoglossum officinale.
Beggar's Lice,	Cynoglossum Morisoni.
Wild Comphrey,	Cynoglossum Virginicum.
Stickweed,	Echinosperrum Lappula.
Clott burr, Cockle burr,	Xanthium Strumarium.
Burdock,	Lappa Major.
Common Beggar ticks,	Bidens frondosa.

There are other plants that are suffered to grow, not only in abundance, but in luxuriance, about the gardens and fields, giving evidence of a soil sufficiently fertile to yield the necessaries of life in abundance. Among them, are the—

Common Thistle,	<i>Cirsium Canceolatum.</i>
Canadian Thistle,	<i>Cirsium arvense.</i>
Curled or narrow leaved dock,	<i>Rumex crispus.</i>
Broad leaved dock,	<i>Rumex obtusifolius.</i>
Field Sorrel,	<i>Rumex acetosella.</i>
Com'n milkweed or silkweed,	<i>Asclepias Cornuti.</i>
St. Johns' Wort,	<i>Hypericum perforatum.</i>
Oxeye Daisey,	<i>Leucanthemum vulgare.</i>

The appropriate time for seeding is a subject worthy the attention of the agriculturist. It is probable there is no part of farming in which so much loss is sustained as from inattention to the proper time of planting and sowing. There appears to be a very general impression, that if the seed is put into the ground sufficiently early to ripen the crop before the appearance of frost, it is all that is required. This is a material error — the process of vegetation, as developed in the growth of indigenous plants, convinces us that we should observe regularity as to seed time, if we expect maturity and perfection in harvest.

You observe some plants around you that commence vegetation very early, continue to grow rapidly, and in the months of June or July arrive at maturity, and then disappear for the remainder of the season. Others show themselves later, but still at the proper time to mature their seed in the greatest perfection.

The seeding for the different crops, seems to require consecutive periods, which, rightly observed, will direct the farmer with much certainty in the attainment of a good crop. This consecutive order also affords him an opportunity of so arranging his seeding as to put in each crop at the season most favorable to a vigorous growth.

In warm climates, where there is no frost during the year that materially affects vegetation, and where there is a succession of crops, there is but one harvest that is perfect. Other crops may successively appear, but they are meagre in quantity, poor in quality, and of little value in comparison with the one that comes to maturity at the appropriate season. Were we to lay down any general position in regard to the best time for seeding, to secure a vigorous growth of the products of the farm, it would be that period so distinctly marked in the field of nature, when the juices of the plant are in strong and healthy circulation.

It needs no external index to point out the time of approaching vegetation. We feel, ourselves, the magical influence of change; and we look out and behold the forest and the orchard pass through the reforming process — the strange metamorphosis from dry limbs and bare poles, to the rich clothing and beautiful foliage of spring. But in this transformation, we observe the same order and rotation which has been recommended to the farmer in putting in his crops. There is emphatically "a time for all things." This beautiful arrangement which furnishes us with a succession of flowering plants, from March to December, directs the farmer to observe the best time for each particular crop, with the assurance, that he in like manner shall receive a succession of farming products from spring to autumn.

Every cultivator of the soil should keep a farm-book, in which he should carefully note the time of planting, sowing, and harvesting, the condition of the soil, an account of the weather, the depredations of birds, insects, &c. He should also keep a general farm account, in Dr. and Cr., and see, at least every fall, how the balance sheet stands. Like the banker, he should be able to show the amount of profit or loss, on his farm, or on any particular crop or mode of cultivation.

Great loss is annually sustained, in the corn crop, from late planting. Corn, planted from the 10th to the 20th of May, usually ripens well, and yields an abundant harvest. Late corn is almost universally poor, and this year will afford but a meagre compensation for the labor bestowed upon it. The heavy rains and unfavorable weather last Spring, have operated unfavorably on the corn, and the crop on the Reserve will, I think, be much less than usual.

I have made considerable inquiry respecting the potato crop. Every farmer with whom I have conversed, has strongly recommended early planting. The early planted have not only yielded the most abundantly, but the best potatoes, and the least diseased.

The individual who should discover a remedy or preventive to the potato disease, would be truly regarded as a benefactor to mankind. The amount of loss annually sustained in the potato crop is almost beyond computation. It is not a calamity confined to a few locations, but, like the cholera, has visited nearly all parts of the globe. The aid of science has been invoked, for its removal, in this country, in England, and on the continent of Europe; and, like the cholera, it may sink under its own exhaustion, and, finally, disappear. It is an old complaint; it has existed, to a greater or less extent, for fifty years. Theories in relation to the nature of this disease, have been promulgated, as numerous as the heads of the fabled Hydra, and, like them, have suddenly passed away by decapitation, making room for a succeeding crop, which, in their turn, have likewise crumbled to the dust.

On this subject, we have had plain, unvarnished opinions from farmers, elaborate dissertations from learned professors, minute investigations and analyses from practical chemists, and the sage views of clergymen, lawyers, and doctors; and, as the result of all this combined and concentrated wisdom, we are told the disease is either a fungus, an insect, a malign condition of the atmosphere, a degeneration of the potato itself, a defect in its elements, a defective mixture of those elements, an excess of crude nutritious juices, or something yet unknown.

From every part of the Union, we learn that the severity of the loss has produced, from year to year, great discouragement among the farmers, in relation to the potato crop. The number of acres planted has greatly diminished, and their attention has been turned to the cultivation of other productions. Many have not raised sufficient for their own family consumption. With farmers along the shore of Lake Erie, and particularly those that cultivate the ridges, there has been generally a fair remuneration for the labor of the agriculturalist.

I lay it down as a position which I think cannot be controverted, that all the developments yet made on this subject, have essentially failed, and are of little value to the farmer. Early planting holds out the greatest prospect of success. Many of our farmers plant their potatoes as early as March, and are generally the most successful in obtaining a fair yield. Even as far north as St. Lawrence county, N. Y., the planting is frequently performed as early as the tenth of April. In some instances, this was done when the weather was so cold that one man covered the potatoes as fast as they were dropped by another, to prevent their freezing. The ground froze after planting to the depth of an inch, yet they ultimately produced a good crop, after being twice cut down with the frost.

Intimately connected with the progress of agriculture, in the northern portion of the State, are the history, growth, and prospects of Cleveland, the "Forest City" of the West. Only so late as 1830, it was a little speck, rising above the horizon of the lake — visible at noon-day as the germ of a city just springing into life. It was lovely, even in infancy; and now as it has come to maturer years, it is, like the description of Sharon, "exceedingly beautiful." It is one of the places that the God of Nature has richly endowed with beauty and all the concomitant means of comfort. Its site is delightful beyond description. It stands on a gravelly plain, sufficiently elevated above the lake and river to preserve it from any inundations, with streets at all times passable, convenient, and comfortable; in striking contrast with the unfortunate locality of some other places in plastic clay, well adapted to the hands of the brick maker.

There are probably not a few in the congregation to-day, who remember the old "Walk in the Water," and her successor, "The Superior." They were masterly structures in their day, and their irregular visits along the shore of the lake, were watched with as much interest as an approaching caravan, or the gorgeous display of a modern circus. I need not now point to your wharf to indicate an increase of shipping, nor to the \$6,000,000 of exports annually, to swell the importance of your commercial operations. Facts and figures are before you. In 1830, Cleveland could number 1,076 human beings; now, ———; and in 1860, her population will only be exceeded, in Ohio, by the Queen City of the West. It is the central outlet of a great and glorious State, with means of communication and intercommunication, scarcely equalled by any internal city in the Union. With the lake on the north, the canal on the south, and railroads diverging in every direction into the interior, and east and west along the shore of the lake, it affords facilities for business and traveling that cannot be surpassed.

Were it possible to carry the present back into the past, when the places now occupied by these fertile fields and gardens were an unbroken forest, it might be pleasing to witness the astonishment, that would agitate the tenants of ancient wigwams, that once had their location among the hills of the Cuyahoga, as the shrill whistle of the locomotive roused the sleeping sachems from their slumbers. Now, the rattling wheels would add to the excitement, until the approaching din thickened around them, and amazement was at its acme as the engine came thundering by, vomiting forth fire and smoke.

All the vagaries and superstitions of the Indians, respecting the evil spirit, with a strange embodiment, would be more than realized. The untutored inhabitants of the forest would be paralyzed with astonishment, at what had thus strangely appeared, and as suddenly passed away. Then we might trace their changing features, as they approached the track, and, step by step, with the native caution of an Indian, proceeded to examine the marks left by the fairy visitor, in his passing flight. Then, too, we might watch their emotions and wonder, as they followed the track to the lake and witnessed the transforming power that had changed the wilderness to the bustling city.

Permit me, for a moment, to address myself particularly to such as are strictly agriculturalists. Have not you placed too low an estimate on your vocation, and accustomed yourselves to look rather below the standard to which you should aspire? I can only allude briefly to a calling both ancient and honorable, that has descended to you from the Patriarchs, and enrolled among its numbers, as it passed down the stream of time, such men as Democritus, and Xenophon, and Hesiod, and Cato, and Cincinnatus, and others, at the present day, who are laboring in the field, in the study, in the laboratory, and elsewhere, to elevate the dignity and character of the oldest and most honorable employment that God appointed to man.

It is in your power to place agriculture in a position that you shall be proud of it yourselves, and never feel, even in the darkest hour of adversity, that you subject yourselves to a species of domestic vassalage by which you are bound to labor for the support of those by whom you are surrounded.

The cultivation of the soil is a noble employment, giving strength and vigor to body and mind. As a vocation, it is honorable; and in estimating the sanative influence of the various species of labor on the human body, there is no employment that ranks higher in the scale of health.

Again, are you seeking the necessary comforts of life? A good farm is the depository, and good cultivation the key that unlocks them for your use. There is a kind of manly independence about the farmer unknown elsewhere. He is not driven, every morning, to the market or grocery, for fruit and meat, potatoes and meal, onions and cucumbers, and numerous other articles that enter into the daily consumption of a family. He has them all in abundance.

Where can you point me, among the various conditions of man, to one which opens a wider field for domestic enjoyment and happiness, than the secluded and peaceful fireside of the farmer—one where the social pleasures of life can be more elevated, and pure, and holy,—one where attachment to home and friends is stronger or more devoted.

We may descant on the beautiful scenery of distant lands, and the endless chain of attractions that meet the eye of the traveler, yet there is something about home that overbalances them all. Everything else may pall, and become insipid; but there is a magic in the word *home*, which causes the heart to beat with a fullness

of joy, that nothing else on earth can equal. It is this home that should be pleasant to you, and attractive to your children. It is the school where the great cardinal virtues of the heart are to be brought into active and vigorous growth—where the minds of your children are to receive the first impress for good, and the first rudiments of an education that shall mark their course in future life, and tell, as time shall develop their future history, the wisdom or folly of that instruction.

DEFIANCE COUNTY.

REPORT OF THE DEFIANCE COUNTY AGRICULTURAL SOCIETY.

This Society was first established on the 25th day of March, A. D. 1848, but it was not fully organized, so as to come under the provisions of the "act for the encouragement of agriculture," until the 14th day of March, A. D. 1851. At this time, thirty-two persons, residents of our county, adopted a constitution and by-laws, agreeably to the rules and regulations furnished by the Ohio State Board of Agriculture, and appointed the following officers, to hold for one year, to wit :

WILLIAM D. HAYMAKER, President.
JOHN TAYLOR, Vice President.
JONAS COLBY, Treasurer.
WILLIAM C. HOLGATE, Secretary.

JAMES CHERRY, WILLIAM TRAVIS, BRICE HILTON, WM. O. ENSIGN, WM. CARTER,	}	Managers.
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The members paid over to their Treasurer the sum of sixty-three dollars, and received from the Auditor of the county an order for the sum of \$34 83 only, there not being population sufficient in the county to justify a larger sum ; making altogether on hand, soon after the close of the last March meeting, the sum of \$97 83:

It was determined, in May, to hold a County Fair, on *Tuesday and Wednesday*, Oct. 7th and 8th ensuing, and in pursuance thereof, the Directors caused to be published in the two papers printed at Defiance, a list of premiums to be awarded at said Fair. This Fair, the *first* ever held in our county, excited a good deal of interest. The cash premiums awarded, aside from premiums on crops (held under advisement and yet to be awarded,) amount to \$50 00.

There were 106 entries of articles and animals for premiums. The exhibition of cattle was particularly creditable to the county. We are glad to note the recent introduction of Durham stock, by our enterprising members, Messrs. Hilton, Langdon, and Roha. We trust our horses, and other domestic animals, ere long, will

also be made better by the introduction of improved breeds. The samples of grain and fruit were good. We think few soils can surpass our clay uplands in a natural adaptation to the raising of wheat. These lands, until recently, have been shunned by our settlers, who have sought the bottoms, and lighter, and sandy soils. We refer you below, to the statement of James Cheny's wheat crop, raised on clay land, of which we have abundance and to spare, in part corroboration of our views.

Our mechanics and manufacturers were not as well represented as they could have been. Some, to be sure, were there, with boots and shoes, and slippers, that scarce could be rivaled; but our manufacturers of harness, of saddles, of plows, of stoves, of buggies and wagons, of whom we have reason to be proud, were not in the field.

Much credit is due to the ladies, for the manner in which they decorated our hall with the products of their skill, taste, and industry. We were not expecting so much, and had not prepared our committees and lists of premiums to meet the exigency. We hope, and know, from the spirit now aroused, we will have future opportunity to make full amends, and that Defiance is to take a proud stand amongst the counties of the State, for the production of things useful and necessary to the sustenance and comfort of human beings.

The principal crops raised in our county are wheat, corn, oats, hay and potatoes. The wheat crop this season was good—average yield, 20 bushels or more per acre. The price is much lower than usual. It is only 50 cents a bushel, at this time. The corn is good, but the crop is not as large as usual; a portion of it destroyed by too much wet weather, and a part by worms. Price 31 to 38 cents per bushel. The usual yield is 50 bushels per acre, of corn. Not a very large crop of oats raised. Price 25 cents per bushel. There was a good crop of hay. Price from five to six dollars per ton. Potatoes good, but scarce. Little or no rot this year. Price 50 cents per bushel. Apples from \$1 00 to \$1 25 per bushel. Little pork; price 5, to 6 cents per pound. Considerable beef, grass fed; price \$3 to \$4 per hundred pounds. The surplus crops of the county are marketed at the town of Defiance.

There is a large flouring mill at Defiance, from which considerable flour is shipped, and several others in the county that do custom work. These are worked by water power. There are some ten or twelve saw-mills in the county, about one-half of which are steam-mills. From these, considerable black walnut and poplar lumber is shipped. There is a good fulling and carding factory at Defiance; and also a large iron foundry, in which is cast a variety of excellent stoves, plows, &c. There are several tanneries in the county.

We received no list of inquiries from State Board, as heretofore, this season, and have delayed report some time, expecting their arrival.*

WM. C. HOLGATE, *Secretary.*

* They were not sent to any of the counties, as it was not thought desirable by the President of the Board to continue to issue circulars of any form for that purpose, but leave the Agricultural Society officers to comply with the law, in such form as they might deem best.

W. W. MATHER.

Statement of James Cheny's Wheat Crop, on $8\frac{1}{8}$ Acres, A. D. 1851, Defiance County, Ohio.

1st. The previous crop was wheat—36½ bushels per acre, on blue grass and white clover, summer fallowed, 1849.

2d. The soil is clay, and descends to south and east.

3d. The quantity of seed, 1½ bushels *club-wheat* to acre.

4th. Sowing, from 6th to 10th September. Harvested 14th and 15th July. Thrashed 29th and 30th July, and cleaned up 1st and 2d August. The actual yield 43½ bushels, besides gleanings—about 8 bushels. The crop was shipped from my farm, (2 miles below Defiance,) August 23d, to Toledo, and stored, and not sold. I was offered 7½ cents above the market price for common wheat offered in the market.

5th. Expenses of cultivation :

Once plowing, $8\frac{1}{8}$ acres	\$10 63
Dragging 4 times, and sowing	8 50
14½ bushels seed-wheat a 75 cents	11 16
Cutting, shocking " "	15 63
Threshing 369½ bushels, 3 cts.	11 08
Drawing grain to machine	4 00
Five days extra men, 1 day each \$1	5 00
Boarding 4 horses and 2 men 1 day	1 25
Cleaning from pen 3 days \$1	3 00
Drawing to granary on farm	1 50
	<hr/>
	\$71 75

The actual cost of the wheat in granary on my farm, ready for market, was 19½ cents per bushel. This land has yielded 80 bushels of wheat per acre in two years, without manure.

Signed

J. CHENY.

The above statements are properly vouched for according to law.

W. W. MATHER.

FAYETTE COUNTY.

Report of the Fayette County Agricultural Society, for the year 1851.

BY DANIEL M'LEAN, PRESIDENT.

1. The principal crops of this county are Wheat, Corn, Oats, Rye, Grass and Hay.

2. WHEAT.—As to what the price and average crop is for this year, I cannot say; but from the average crop of last year, the estimate would not be too low at 18 bushels to the acre. The principal disease to which it is subject is the rust. It is found that deep plowing and rolling the ground well before sowing, are the sure means for a crop. The amount of wheat raised in this county is not short of 300,000 bushels this year.

3. CORN.—The average yield per acre, this year, is not less than 50 bushels; the crop this year is remarkably good; the quantity raised in the county this year, will exceed two millions of bushels. This crop is fed to cattle and hogs, horses and mules, in the county; it has been principally sold at from 15 to 20 cents per bushel.

4. OATS—This crop has been very good this season, in this county. This crop usually does well here, if the season is suitable; average yield, forty bushels to the acre; principally consumed in the county.

5. RYE—This has been a good season for this crop; I cannot say how much has been raised; average yield per acre, 30 bushels. Barley—Of this, very little if any has ever been raised in the county.

6. GRASS AND HAY—This crop has been good this year; of hay, the average yield is probably not less than $1\frac{1}{2}$ tons to the acre, and is all consumed in the county; none exported as yet. But when the Cincinnati, Wilmington and Zanesville railroad is finished, hay can be sent to Cincinnati and other markets at a profit.

7. ROOT CROPS—None raised in this county for feeding stock. The season has been favorable for root crops, and there has been quite a quantity of potatoes raised in the county for home consumption; average yield per acre, 100 bushels.

8. FRUIT—None.

9. SEEDS—Some clover, timothy, and flax seed are grown in the county, but not to any considerable extent; not enough so as to be able to give the amount they will yield to the acre.

10. OTHER CROPS—None grown, to any extent.

11. DAIRY PRODUCTS—Butter, there is considerable manufactured, and some more than is necessary for home consumption, which is usually exchanged for goods and taken to Cincinnati. Cheese, not enough manufactured for home use; not much attention paid to dairy stock; the farmers here let the calves take the milk.

12. **SHEEP AND WOOL** — The number of sheep listed this year, is 38,290, valued at \$28,592. Quality of sheep good. Average clip of wool, $2\frac{1}{4}$ pounds per head, making 86,085 pounds; value, 40 cents, amounting to \$34,434. This stock is improving rapidly, both in quality and number.

13. **PORK** — The number of hogs listed this year, is 23,664, valued at \$55,508. The number of hogs have decreased in this county, but from appearances, the prospect would indicate an increase; the stock is good; none slaughtered but for home use; they are driven to different markets.

14. **BEEF** — The number of cattle listed in this county this year, is 15,409, valued at \$239,084; this includes all that are taxable. Average value of four year old cattle, say from \$38 to \$40; they are principally driven to the eastern market, some are driven to Cincinnati and other markets. The number raised in the county is hard to be estimated. The quality is good, and stock much improved, and the spirit of improving our cattle stock is increasing rapidly.

15. **HORSES AND MULES** — The number of horses listed this year, is 5,363, valued at \$222,087. Some attention is now given to improve the stock; number produced annually and exported, hard to be estimated. Number of mules in the county (listed), 124; value, \$6,665. The spirit for raising this kind of stock, is increasing.

16. **IMPLEMENTS** — No new or improved agricultural implements have been introduced, except the corn drill, which has been used to good effect, and has given general satisfaction, as far as used.

17. **OTHER IMPROVEMENTS** — Considerable improvements have been made, and are still making, in ditching and draining the wet and marshy lands.

18. **MINERALS** — None.

19. **MILLS, &c.** — There has been, and still is, a spirit of improvement in the way of mills, principally by steam power. Our water power is very inefficient.

20. The act in relation to public shows has been strictly enforced, (\$40 has been received in the county this year, half of which goes to the fund,) and there has been collected for the State Agricultural Fund, the sum of \$20, this year.

No land escheated.

DANIEL McLEAN, *President.*

S. F. KERR, *Secretary.*

Officers for the present year —

DANIEL McLEAN, President.
JACOB JAMISON, Vice Pres't.
MICAJAH DRAPER, Treas'r.
S. F. KERR, Secretary.

SAMUEL MYERS, HAMILTON ROGERS, WM. H. LATHAM, A. B. SEYMOUR, J. F. WILLIS,	}	Managers.
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Abstract of Treasurer's Report.

RECEIPTS.

Amount received of members	\$68 20
Amount by subscription	30 00
	<hr/>
	\$98 20
Amount received from county fund.....	98 20
	<hr/>
Total receipts.....	\$196 40

EXPENSES.

Amount paid in premiums	\$155 50
Contingent expenses	20 00
	<hr/>
	\$175 50
	<hr/>
Balance on hand	\$10 90
	<hr/>

M. DRAPER, *Treasurer.*

FRANKLIN COUNTY.

*Report of the Officers of the Franklin County Agricultural Society.**To the Ohio State Board of Agriculture:*

The President and Secretary of the Franklin County Agricultural Society respectfully report:

This Society was organized in pursuance of law, on the 6th day of September last. It commenced operations with 41 members. Its officers are as follows:

SAMUEL MEDARY, President.
 SAMUEL BRUSH, Vice Pres't.
 ROBERT HUMB, jr., Treasurer.
 WM. DENNISON, jr., Secretary.

PLINY CURTIS, DAVID TAYLOR, WILLIAM L. MINER, WM. H. RABBY, JOSEPH O'HARRA,	} Managers.
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Although the organization of the Society was much later in the year than could have been desired, in view of its holding a Fair previous to the 1st of November ult.—the latest period of the past fall when such an exhibition could be held agreeably to law,—yet so earnest was the wish of its members to enter at once upon active operations, and thus manifest their purpose to make the society an effective instrument for the improvement of agriculture within this county, and with her sister societies, an useful co-operator in the noble mission of encouraging agricultural and all other industrial avocations, throughout the State, that the Board of Directors cheerfully yielded to their request for the holding a Fair on the 23d day of October. Notice for the exhibition was accordingly given; a carefully prepared schedule of articles, for which premiums would be awarded, was published; awarding committees were appointed, and all the means that appeared to the Directors to be expedient, were employed to excite the interest of our community in the society's behalf, and to secure a general attendance at the Fair. At the appointed time, the exhibition was held, and was attended by a much larger number of the farmers and other citizens of the county than could reasonably have been expected, under the circumstances. Everything passed off handsomely. The Fair was in every respect creditable to the exhibitors, and gratifying to the society. In the number and variety of articles presented for competition, as well those of agriculture as of domestic manufacture, ample assurance of the rapidly increasing wealth and prosperity of our county was given. From the evidence furnished by the Fair of the productiveness of our soil, the industry and skill of our citizens, and their earnest interest in the welfare of our society, which they manifested on that occasion, the undersigned cannot doubt that that the future of the society will be one of much usefulness, alike honorable and gratifying to every industrial class of our community. It may be said even now, in its infancy, to be in a flourishing condition. Many additions of members have been made since its organization, and a large increase will certainly be secured before its next annual exhibition. The undersigned embrace this occasion to commend the society to the esteem and confidence of the mother Board, and also on its behalf, tender their thanks for the prompt and generous manner in which your Board accorded to it, on the occasion of its recent exhibition, the use of the grounds and buildings occupied by the late State Fair.

Appended to this report you will find a statement of the Treasurer, exhibiting the financial condition of the Society.

The undersigned report that the short time since the organization of this society has prevented them from preparing a particular statement in regard to the agricultural statistics of this county, as required by the law.

S. MEDARY, *President.*

WM. DENNISON, jr., *Secretary.*

Columbus, December 1, 1851.

Treasurer's Report.

Cash received of 329 members (one dollar each)	\$329 00
" " Treasurer of Franklin county	200 00
" " from sales of admission tickets at Fair	59 50
Total	\$588 50

From which, deduct the following amounts :—

Cash paid J. H. Riley & Co., for books	\$6 12
P. Curtis, for expenses	2 37
— Smith, for hay	5 30
A. W. Dolson, for Clerk hire	2 00
E. Butler, do do	18 00
C. T. Solis, do do	1 00
S. Medary, for printing	34 00
H. Kighley, for 1 day's services	1 50
T. J. McCamish, do do	1 50
Thos. O'Hales, 1½ do do	2 63
Geo. Riordan, 1 do do	1 50
Blynn & Baldwin, for silver cups	73 85
Cash paid for premiums	28 00
	\$177 77

Balance in Treasurer's hands, November 28, 1851	\$410 73
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ROBERT HUME, Jr., *Treasurer.*

JOHN L. GILL'S CORN CROP.

Franklin County, ss. :

John Graham, being duly sworn, says he is a surveyor, that he surveyed with chain and compass the land upon which John L. Gill raised a crop of corn the past season, and the quantity of land is 11 acres and 109 square poles. Said deponent further says, that the shocks of corn in said field are very uniform in size, so far as he was able to judge.

JOHN GRAHAM.

Sworn to and subscribed before me this 3d day of December, A. D., 1851.

J. WM. BALDWIN, *Notary Public.*

Franklin County, ss. :

John L. Gill, being duly sworn, says that he has raised a crop of corn, the past season, upon the land surveyed by John Graham, and that the quantity of grain raised thereon, was seven hundred and thirty (730) shocks, of which forty-one (41) shocks had been husked, which produced seventy-nine (79) bushels, making the average of the field at fourteen hundred and ten (1,410) bushels; there being 11½ acres, make an average of one hundred and twenty (120) bushels to the acre; and that he was assisted in harvesting and measuring said 41 shocks by John Wells, and that the statement annexed, subscribed by this deponent, as to the

manner of cultivation, expenses, &c., is in all respects true, to the best of his knowledge and belief, and that the sample of grain exhibited, is a fair average sample of the whole crop.

JOHN L. GILL.

Sworn to before me, this 3d day of December, 1851.

NATHAN BROOKS, J. P.

Franklin County, ss. :

John Wells and John Henson, being duly sworn, say that they assisted John L. Gill in harvesting, getting out and measuring said forty-one (41) shocks referred to in the above affidavit, and that the quantity of grain was seventy-nine (79) bushels, as stated in the affidavit of John L. Gill.

JOHN WELLS,
his
JOHN X HENSON.
mark.

Sworn to before me, this 3d day of December, 1851.

NATHAN BROOKS, J. P.

NOTE.—	Shocks.		Bushels.		Shocks.		Bushels.
	41	:	79	:	730	:	X = 1406.58
	Bushels.		Acres.		Bushels.		Acres.
	1406.58	:	11.681	:	X :		X = 120.41 bush.

The measured bushel weighed $56\frac{1}{2}$ lbs., or $\frac{1}{4}$ lb. more per bushel than the bushel by weight, and this would add about 1 bushel and $\frac{1}{15}$ per acre, and would make 121.47 bushels per acre.

The statement of Mr. Gill, mode of cultivation, &c., was before the Board, and a premium was awarded for the corn crop. That statement was in the hands of the Recording Secretary, but has, perhaps, been lost, as it has not been sent to the office of the Board, though especially requested.

The mode of cultivation was that usually pursued, differing from that of the adjoining fields, only in having the sub-soil loosened by a sub-soil plow. The fields adjoining gave, with the same culture as this, only — bushels per acre.

GALLIA COUNTY.

Report of the Gallia County Agricultural Society.

Our society was organized for the first time on the 8th of August last, when a constitution and by-laws were adopted, a copy of which we enclose. (Omitted.)

On the 10th of August, the Board of Directors met and offered the following list of premiums: (Omitted.)

The Fair was held on the 17th of October. For a detailed statement of the award of premiums, we would refer to the proceedings.

For a statement of the condition of the funds of the society, reference is had to the report of the Treasurer of the society herewith enclosed.

The number of members is 70, and the prospect fair for a large increase. The principal products of the county are Corn, Wheat, Potatoes and Beans. The principal stock, Horses, Cattle, Sheep and Hogs. The principal exports are Horses, Cattle, Flour, Corn and Potatoes.*

Our crops, during the past year, have been fully an average. We have no data by which to give the average products.

We doubt not there will be a large increase of membership during the next year, and the display of articles more extensive than this.

The committee on the Products of the Soil reported that none of the competitors had complied with the requisitions of the law in regard to the measurement of crops, &c.

Truman Guthrie, from one-half acre of ground, dug 100½ bushels of potatoes, and from another half acre 91 bushels. He also raised on one acre of ground 51 bushels of oats.

McCoy Ralston, from one-half acre of ground, dug 129½ bushels of potatoes.

James H. Guthrie, from one acre of ground, gathered 145 bushels of corn.

Augustus S. Guthrie raised 99½ bushels of corn on one acre of bottom land.

Mr. Samuel Cole, Jr., from 4 acres, harvested 157 bushels of wheat.

A. VANCE, *Rec. Secretary.*

Report of the Treasurer of the Gallia County Agricultural Society.

A. P. Rodgers, in account current with the Gallia County Agricultural Society :

DEBITOR.

July 4, 1851.	To cash from members	\$60 00
Oct. 17, 1851.	To cash from county treasurer.....	59 00
		<hr/>
		\$119 00

*Poultry and Eggs might with propriety be added.—W. W. MATHES.

CREDITOR.

Dec. 1, 1851.	By amount paid for premiums awarded by county fair--	\$18 00
	By cash on hand-----	101 00
		<u>\$119 00</u>

The premiums awarded at the Gallia County Fair amount to \$34 ; of which has been paid by the Treasurer \$18. Leaving unpaid, on the 1st of December, 1851, on account of premiums, \$16. That, taken from the amount on hand, will leave in the hands of the Treasurer \$85, to commence the coming year.

ALEX. P. RODGERS, *Treasurer*.

The officers of our county Agricultural Society are—

JOHN McDANIEL, President, address, Patriot.		
JOHN McCORMAC, Vice President, address, Gallipolis.		
ALEXANDER RODGERS, Treasurer,	do	do
ALEXANDER VANCE, Secretary,	do	do

GEAUGA COUNTY.

M. L. SULLIVANT, Esq., *President of State Board of Agriculture*:

Enclosed is the report of the Geauga County Agricultural Society, giving a detailed statement of its operations and its financial condition. The measures adopted by the society, and means pursuing, are such as to justify sanguine expectations, that more permanent good will be accomplished in future than has been realized in former years. The community, generally, are taking deeper interest in its proceedings and exhibitions. Its beneficial effects are seen and more generally appreciated. At our last annual exhibition, there were not as many matched working oxen and steers as formerly ; the display of such stock had been the pride of our fairs, and on such the society had felt that they might successfully compete with any county fair. Although various causes lessened the amount of stock, yet the number of breeding animals were greater and far better in quality than at any former time. The foundation for raising good stock, both of the Durhams and the Devons, is laid deep and broad ; and the skill, taste and enterprise of our farmers will perfect them, to their credit and the general good. The amount of butter and cheese made has increased, the quality improved, and prices more remunerating. Many who have been engaged in the dairy business are devoting all their energies to stock growing, as the care and labor is less. Mr. Elliott, of the State Board, did us good service by his essay on fruit at our exhibition, awakening a more general interest in that important branch of husbandry.

Deeper plowing, more general cultivation of clover, use of lime on land, and a systematic rotation of crops, are not only subjects of discussion, but are being put into practice, and will doubtless show the capabilities of our soil to produce much more in amount, better in quality, and guard against the vicissitudes of excessive wet or drouth.

In one township, Claridon, a "social circle" has had weekly meetings, during the fall and winter evenings, to inform themselves on literary and scientific subjects, and especially their connection and application to agricultural and horticultural pursuits—to test the fruit grown—to obtain and cultivate the best varieties—and keep up a succession of good fruit during the year. During the season of growing and ripening fruit, to meet in the afternoon for a social and fruit banquet. Many fruit and ornamental trees grace the fruit and door yards, and road sides, in consequence of the spirit and emulation excited by such a society. The ladies' department is well sustained at the circle, improving their share of the time in discussing such topics as are agreeable to their taste and avocation in life; and all have ample opportunity to test their skill and proficiency in one branch of domestic economy at the close of the circle.

LESTER TAYLOR, *President.*

Abstract of Treasurer's Report for 1851.

Amount from last year in the treasury	\$63 00
Amount received from members this year	64 00
Amount received from the county	64 00
	<hr/>
	\$191 00
Amount of premiums awarded and expenses of the society for 1851	127 36
	<hr/>
Balance in treasury	\$63 64

Number of Members, 196.

Names and Post Office Address of Members.

LESTER TAYLOR, President, Claridon.
 LYMAN R. MILLARD, Vice President, Huntsburg.
 O. P. BROWN, Treasurer, Chardon.
 L. J. RIDER, Secretary, do

GREENE COUNTY.

The report of this year's crops will not vary, in many respects, from that of last.

The principal crops are the same ;—wheat, corn, oats, grass, rye, barley, buck-wheat, flax-seed, and grass-seed.

WHEAT.—The average crop per acre, this year, is at least eighteen bushels—of good quality. Serious loss has been sustained, for a few years past, from rust and fly. No injury from these causes this year.

CORN is of better quality than last year. Yield, from forty-five to fifty bushels per acre.

OATS averaged, last year, only about ten bushels per acre, or one-fourth of a crop; this, average about forty.

RYE AND BARLEY. — Crops good.

GRASS AND HAY. — Last year, one fourth of a crop; this, from one and a half to two tons per acre, average.

ROOT CROPS, of all kinds, better than last.

POTATOES average from 150 to 200 bushels per acre. For the last five or six years, this crop has been almost destroyed by the rot; but is, this year, almost entirely free from it. The quality is excellent. Sweet potatoes, good quality, and abundance of them.

FRUIT was almost a total failure.]

GRAPES were as good as formerly, and quite a number of our people are turning their attention to their culture, for the purpose of making wine. Already, experiments have been tried, and succeeded in making an excellent article.

CLOVER AND TIMOTHY SEED. — Very fine. Enough to supply the home demand.

FLAX SEED. — Average, twelve bushels. More than usual amount raised — for the seed, not for the fibre.

DAIRY PRODUCTS. — Steadily on the increase, in quality as well as quantity.

FARM IMPLEMENTS. — Improving. Although not manufactured to a great extent in our county, yet there is a decided effort to obtain the best in use, for every department of agriculture.

The assessor's returns furnish the most reliable estimate of the number and value of stock.

Number of horses.....	7,343	Estimated value.....	\$304,286
Do cattle	12,146	do	126,553
Do sheep	36,665	do	21,897
Do hogs	26,907	do	58,639
Do mules	48	do	2,155

In the western portion of the county, tobacco was cultivated far more extensively than any previous year. The number of acres, or yield, are not known; but it is considered a very profitable crop.

The amount collected from public shows, for the Agricultural Fund, is twenty dollars.

No escheated lands. j

Treasurer's Report to December 1, 1851.

Amount in treasury, after all premiums, awarded at the Fair of 1850, were paid	\$131 14
Premiums on crops, for 1850.....	\$8 00
Use of show ground, for 1850.....	5 00
	<hr/> 13 00
Balance in treasury, Oct. 8, 1851.....	\$118 14
Cash receipts of Fair, Oct. 8 and 9, 1851	322 77
Proceeds of sale of lumber, &c.....	25 92
Value of lumber and other property on hand	18 00
Received from the County Treasury.....	109 72
Total	<hr/> \$594 55
Amount paid out on premiums.....	\$260 00
Expenses of Fair	178 40
	<hr/> 438 40
Balance in treasury.....	\$156 15
Premiums were offered amounting to.....	\$450 00
Total amount awarded.....	295 00
Unpaid premiums.....	35 00
When called for and paid, will leave in Treasury.....	<hr/> <hr/> \$121 15

JOHN VAN EATON, Treasurer.

December 1, 1851.

The following officers were elected for the ensuing year, and until their successors are appointed :

WALTER PARRY, President.
 JOHN S. McCLUNG, Vice President.
 JOHN VAN EATON, Treasurer.
 JOHN BOYD, Secretary.

A vacancy has since occurred in the Board, by the death of Mr. James Long. The society also sustains a loss in the death of Alexander Ruff, who, for several years, has been its president, and fast friend. No man has done more for the soci-

ety, or labored more for the agricultural interest. He made it a subject of study, and was not satisfied merely with *plowing the surface*, but investigated the laws of production, and traced carefully the results of his labor to their cause.

The society numbers about 200 members.

The Board adjourned, to meet on the first Saturday of March, 1852, at which time, list of premiums will be arranged for the next annual Fair.

WALTER PARRY, President.

JOHN BOYD, Secretary.

December 1, 1851.

Statement of Samuel Dallas, applicant for premium on his crop of Potatoes, produced from one-half an acre.

1. The previous crop was wheat, with manure.
2. The soil, clay ; surface, rolling.
3. Six bushels of seed planted — four of them pinkeyes, 1 bushel neshanock, one bushel Scotch McDaniels.
4. Planted May 7 ; gathered October 7, 1851. The land has been under cultivation 50 years ; rotation of crops, corn, clover, wheat, &c. The holes were drilled at distances of 10 and 12 inches, in rows $3\frac{1}{2}$ feet apart. After planting, one-fourth of an acre of this ground was covered with straw, 12 inches in depth. Nothing more done. The other one-fourth acre was cultivated in the usual way. There was no difference in the soil of the two portions ; were prepared with manure in the same way ; but the yield of that part covered with straw, was 70 $\frac{1}{2}$ bushels ; the other, 52.

Credit, by 122 $\frac{1}{2}$ bushels, at 28 cents per bushel		\$34 30
Debtor, to one day, hauling manure, at	\$1 50	
One half day, plowing	75	
6 bushels seed, at 50 cents	3 00	
1 day, planting	75	
Hauling straw	1 87 $\frac{1}{2}$	
Gathering	1 87 $\frac{1}{2}$	
	<hr/>	\$9 75
Net profit		<hr/> \$24 55

The above is vouched for according to law.

Statement of Samuel Dallas, on his Potato Crop.

1. The previous crop was a crop of barley.
2. Soil, black loam ; surface, rolling. No manure.
3. Planted May 1 and 2, 1851 ; gathered November 28, 29, and December 1 ; in hills three feet and one-half apart, each way ; three grains in each hill.
4. The land measured five acres.

Credit, by 465 bushels, at 25 cents.....		\$116 25
Debtor, to 5 days, plowing, at \$1 50.....	\$7 50	
2 " furrowing, at \$1 25.....	2 50	
1 " covering with plow.....	1 25	
2 " dropping, at 50 cents.....	1 00	
1 " harrowing, with two-horse harrow.....	2 00	
4 " plowing, with double shovel.....	5 00	
1 " cultivator.....	1 25	
1 " plowing one-half of the whole.....	1 25	
2 " cutting suckers.....	1 00	
13 " gathering corn, at 62½ cents.....	8 12½	
		30 87½
Total profit of five acres.....		\$85 37½
Do per acre.....		17 80

The above is vouched for according to law.

GUERNSEY COUNTY.

Annual Report of the Guernsey County Agricultural Society, for 1851.

To M. L. SULLIVANT, *President of State Board of Agriculture* :

DEAR SIR : In compliance with the law of February 27, 1846, for "the encouragement of agriculture," I respectfully submit the following report :

The fifth annual fair of this society was held at Cambridge, on the 16th and 17th days of October—the first day for stock, and the second for agricultural and mechanical products. The list of premiums offered, was regularly published in the "Guernsey Times" and "Guernsey Jeffersonian," for more than 30 days prior to the fair.

The fair was attended by a large number of people on both days, and the weather being beautiful, all persons present greatly enjoyed the occasion. The exhibition of horses was much greater than at any previous fair, while the number of cattle, sheep and hogs, was not quite so good as in other seasons. However, taken altogether, it was the best fair we have had.

On the afternoon of Friday, the members of the society, and others present at the court house, were suitably addressed by T. W. Peacock, Esq., President, at the close of which the awards were announced.

Moses Sarchet, Esq., Treasurer, presented his report, which exhibited the state of the funds as follows :

Balance from 1849.....	\$48 30
From members in 1850.....	90 00
From county treasury in 1850.....	90 00
Fund of 1850.....	\$228 30
Paid out for premiums, &c., in 1850.....	128 48
Balance from 1850.....	\$99 82
From members in 1851.....	96 00
Applicable for payment of premiums in 1851.....	\$195 82

This society was organized on the 7th day of December, 1846. The following is a list of the officers for each year, with their post office address :

1846.

President—M. GASTON, Cambridge.
Vice President—T. W. PEACOCK, Cambridge.
Treasurer—M. SARCHET, do
Secretary—C. J. ALBRIGHT, do

1847.

President—M. GASTON, Cambridge.
Vice President—M. SARCHET, Cambridge.
Treasurer—A. MCCracken, do
Secretary—C. J. ALBRIGHT, do

1848.

President—M. GASTON, Cambridge.
Vice President—R. B. MOORE, Cambridge.
Treasurer—M. SARCHET, do
Secretary—C. J. ALBRIGHT, do

1849.

President—N. EVANS, Cambridge.
Vice President—HUGH WILSON, Cambridge.
Treasurer—M. SARCHET, do
Secretary—C. J. ALBRIGHT, do

1850.

President—T. W. PEACOCK, Cambridge.
Vice President—G. LOFLAND, do
Treasurer—M. SARCHET, do
Secretary—C. J. ALBRIGHT, do

1851.

President—G. LOFLAND, Cambridge.
Vice President—T. OLDHAM, do
Treasurer—M. SARCHET, do
Secretary—C. J. ALBRIGHT, do

No escheated lands in this county. Amount paid treasurer for show permits, \$60.
 Herewith I send you some agricultural statistics, which were collected from the assessor's returns of last spring, and published in the "Guernsey Times."

All of the foregoing report is respectfully submitted.

C. J. ALBRIGHT, *Secretary*.

Wheat and Corn Crop for 1850.

The following table exhibits the product of the wheat and corn crops in Guernsey county, for 1850, as returned by the assessors. It will be seen that we have included all the townships that composed the county last year. As this is the first census of the kind taken in this county, it is not likely that it shows the full amount of wheat and corn grown. Hereafter, the returns will, in all probability, be more complete. The table, however, is a very interesting one.

TOWNSHIPS.	WHEAT.			CORN.		
	Acres.	Bushels.	Average.	Acres.	Bushels.	Average.
Adams	1,930	29,862	15½*	979	33,761	34½*
Beaver	1,666	25,857	15½*	1,395	50,722	36½†
Buffalo	1,439	19,268	13½†	1,243	43,309	35*
Cambridge	2,146	31,778	14½†	1,719	57,973	33½*
Centre	1,491	19,038	13*	1,073	31,100	29
Jackson	1,879	26,246	14*	1,571	51,356	32½
Jefferson	1,648	19,717	12*	1,071	29,347	27½*
Knox	1,344	18,627	13½†	774	21,695	28
Liberty	1,192	18,680	15½	872	27,529	31½†
Londonderry	2,737	42,920	15½	1,327	48,918	37*
Madison†		36,672			28,556	
Millwood	1,087	17,732	16½	1,100	40,634	37*
Monroe	1,953	28,084	14½	803	23,852	29½*
Oxford	2,121	31,790	15	1,529	45,054	29½*
Richland	1,059	16,170	14½	999	29,592	29½*
Seneca	1,065	13,875	13	982	37,513	38
Spencer	2,285	34,601	15½*	1,620	58,556	36½
Washington	1,777	28,310	16*	731	25,262	34½†
Westland	2,033	29,278	14½*	1,190	42,884	36
Wheeling	2,600	30,404	14½*	1,115	33,330	30*
Wills	2,282	32,344	14½*	1,884	59,687	31½
Wright	1,070	14,534	13½†	1,079	30,550	28½
Total	35,302	564,787		25,056	851,181	

* Nearly.

† A little over.

‡ No return of acres made.

Average product of wheat per acre in the county, exclusive of Madison township, 15 bushels, nearly. Average crop of corn per acre, exclusive of Madison township, nearly 33 bushels.

Largest Crops of Wheat and Corn.

From the assessor's returns we make up the following table, showing the names of the persons, in the several townships, who produced the largest wheat and corn crops, the number of acres grown, and the average product per acre :

WHEAT.

TOWNSHIPS.	NAMES OF PERSONS.	Acres.	Bushels.	Average.
Adams -----	J. Mehaffey -----	60	850	14*
Beaver -----	Thomas Jones -----	52	1,150	22 $\frac{1}{2}$
Buffalo -----	A. Thompson -----	55	1,000	18*
Cambridge -----	I. Oldham -----	45	1,252	27 $\frac{1}{2}$
Centre -----	J. Patterson -----	40	600	15
Jefferson -----	A. Kimble -----	40	700	17 $\frac{1}{2}$
Jackson -----	C. Carrell -----	32	700	22 $\frac{1}{2}$
do -----	Jno. Selby -----	45	700	15 $\frac{1}{2}$
Knox -----	Elijah Coulter -----	30	540	18
Liberty -----	George Stewart -----	37	650	17 $\frac{1}{2}$
Londonderry -----	A. Smith -----	78	1,500	19
Monroe -----	Francis Little -----	96	1,500	15 $\frac{1}{2}$
Millwood -----	Jno. Long -----	23	520	22 $\frac{1}{2}$
Oxford -----	J. McClenahan -----	30	658	21 $\frac{1}{2}$
Richland -----	A. Dilley -----	34	600	17 $\frac{1}{2}$
Spencer -----	George Forsythe -----	30	850	28 $\frac{1}{2}$
Seneca -----	Benjamin Nillen -----	19	350	18 $\frac{1}{2}$
do -----	Richard Coen -----	20	350	17 $\frac{1}{2}$
do -----	James Finley -----	22	350	16 $\frac{1}{2}$
Washington -----	S. Hedge -----	60	850	14*
Westland -----	John White -----	85	1,000	11 $\frac{1}{2}$
Wright -----	William Bennett -----	36	580	16*
Wheeling -----	M. Taylor -----	89	1,600	18
Wills -----	Hiram McNett -----	40	700	17 $\frac{1}{2}$

* Nearly.

† A little over.

CORN.

TOWNSHIPS.	NAMES OF PERSONS.	Acres.	Bushels.	Av'age.
Adams.....	George Gill.....	18	1,100	61*
Beaver.....	Joseph Jones.....	27	1,000	37
Buffalo.....	William J. Crow.....	35	1,700	48½
Cambridge.....	W. McCracken.....	44	2,768	63½
Centre.....	J. Patterson.....	15	800	53½
do.....	William Hanna.....	18	800	44½†
do.....	Andrew Hanna.....	30	800	26½
Jefferson.....	Isaac Mullen.....	18	800	44½†
do.....	George Linn.....	20	800	40
Jackson.....	Corrin Brooks.....	80	3,400	42½
Knox.....	B. C. Castor.....	19	800	42*
Liberty.....	William Frame.....	29	1,400	48½
Londonderry.....	Amos Smith.....	24	1,200	50
Monroe.....	William Thompson.....	19	600	31½*
Millwood.....	Knowls Doudna.....	23	1,160	50
Oxford.....	W. Henderson, sen.....	40	1,600	40
Richland.....	Jno. Dolleson.....	25	1,000	40
do.....	Daniel Barkhurst.....	28	1,000	35½†
Seneca.....	Hiram Danford.....	30	1,200	40
Washington.....	Samuel Hedge.....	30	900	30
Westland.....	John Stevenson.....	37	1,500	40½*
Wright.....	Jacob McVay.....	20	940	47
Wheeling.....	Mary Taylor.....	30	1,000	33½
Wills.....	Nimrod Williams.....	51	2,000	39½

* Nearly.

† A little over.

It will be seen that nearly all of the above crops, both wheat and corn, exceeds, and in some instances largely, the average product per acre in the township or county; and yet they have not been selected as examples of the largest yield for the ground occupied. Many farmers of Guernsey, no doubt, could show larger yields per acre than any in the above table. Indeed, some of the above mentioned crops do not show very creditable farming, and yet the grower produced the largest number of *bushels* in his township, or, at least, as large as any other person.

Taxable Stock of Guernsey County.

From the returns made by the assessors of the several townships of this county, including those townships and parts of townships cut off into Noble county, we make up the following table, showing the number of taxable horses, cattle, sheep and hogs. It will be seen that Oxford has the most horses and hogs, Spencer the most sheep, and Wheeling the most cattle. There are no mules in any of the townships but Jackson, where there are 67 head. Londonderry has 2 asses.

TOWNSHIPS.	Horses.	Cattle.	Sheep.	Hogs.
Adams	356	633	4254	931
Wheeling	392	1378	2504	762
Seneca	512	777	2952	937
Millwood	531	843	3815	843
Richland	328	742	2930	751
Wright	349	637	1816	701
Beaver	546	908	2322	1208
Jackson	439	687	3369	948
Londonderry	619	957	4819	1379
Centre	329	451	2664	723
Madison	382	643	2795	863
Jefferson	361	653	2133	834
Westland	394	617	3268	906
Knox	274	526	2129	686
Spencer	553	1042	9527	1077
Monroe	361	586	2597	582
Buffalo	392	742	4569	869
Liberty	316	588	2564	700
Wills	629	801	5658	1186
Cambridge	544	882	4215	1342
Oxford	644	949	2724	1400
Washington	366	635	3945	721

The Dogs.

We intended to give the *census* of dogs in Guernsey county. Here it is:

Adams	119	Monroe	142
Beaver	239	Oxford	266
Buffalo	66	Richland	112
Cambridge	234	Spencer	172
Centre	136	Seneca	125
Jefferson	123	Wills	217
Jackson	148	Westland	139
Knox	56	Wheeling	106
Liberty	112	Wright	116
Londonderry	219	Washington	133
Madison	90		
Millwood	162	Total	3251

HARDIN COUNTY.

To the State Board of Agriculture:

We take great pleasure in laying before you the first annual report of the Agricultural Society of this county.

The annual Fair of the society was held at Kenton, on the 22d day of October, 1851. The attendance was very large, notwithstanding the day was cold and disagreeable. The show of cattle and horses was much better than anticipated, even by the most sanguine, and no doubt is entertained but that a return of our cattle show and Fair will bring with it an exhibition of increasing interest. A spirit of ambition, with a view to the improvement of our live stock, prevails among our farmers, that is alike laudable and praiseworthy; and in this and other respects the efforts of our society have been productive of general utility. The ladies' department was well represented in all the articles for which awards were offered, and in fact, many more.

One thing, however, operated somewhat against us; our Fair being continued but one day, the arrangements were not sufficiently extensive for the very great variety of stock and articles exhibited. We shall, however, improve on our first experience, hereafter.

WHEAT—There was only an ordinary crop; probable average, 15 bushels; price, 46 cents.

CORN—Average yield, 35 to 40 bushels; price, 20 to 25 cents.

OATS—Good yield; price, 18 to 20 cents.

POTATOES—Very ordinary yield; price, 37 to 40 cents.

HAY—A very good yield; price, \$4 per ton.

FRUIT—A failure in crop; quality, when a crop, good.

Market, Kenton, on the line of Mad River and Lake Erie railroad.

There are no escheated lands in our county. The amount to which the State Board is entitled, out of permits of shows, is \$10.

Enclosed you will find a synopsis of the Treasurer's report.

Treasurer's Report.

RECEIPTS.

Received from members	\$85 00
Received from county Treasury	41 00
Total	<u>\$126 00</u>

EXPENSES.

Paid out in premiums and expenses of Fair	\$69 12
Amount liable to be paid as awarded	29 12
	<u>\$98 24</u>
Balance in Treasury	<u>\$27 76</u>

WALTER KING, *Treasurer.*

Number of members who have paid, 176 ; and some have not yet paid over.

Our officers are as follows, to be succeeded by others at our next meeting, to be held January 1, 1852.

JOHN F. HINKLE, President, Roundhead.
 THOMAS ROUGH, Vice Pres't, Kenton.
 J. K. GOODIN, Secretary, do
 WALTER KING, Treasurer. do

Our society was formed February 14th, 1851.

JOHN F. HINKLE, *President.*

J. K. GOODIN, *Secretary.*

HARRISON COUNTY.

Fifth Annual Report of the Harrison County Agricultural Society.

To the Ohio State Board of Agriculture :

GENTLEMEN — In reply to the circular which you sent us, we would respectfully State, that this Society was organized on the 12th day of the twelfth month, A. D., 1846, by 38 persons. The officers then chosen were as follows :

JOHN HAMMOND, President, Short Creek.
 GEO. W. SCOTT, Vice Pres't, do
 JOHN HEBERLING, Treasurer, do
 EZRA CATTELL, Secretary, Harrisville.

The officers elected in 1847, were —

JOHN HAMMOND, President, Short Creek.
 G. W. SCOTT, Vice Pres't, do
 JOHN MARTIN, Treasurer, do
 EZRA CATTELL, Secretary, Harrisville.

Those elected in 1848, were —

THOMAS LEE, President, Cadiz.
 STEWART SHOTWELL, V. P., do
 ABRAHAM HOLMES, Treas'r, Short Cr'k.
 EZRA CATTELL, Secretary, Harrisville.

The officers elected in 1849, were —

THOMAS LEE, President, Cadiz.
 JOSEPH COPE, V. P., Short Creek.
 AB'HM HOLMES, Treas'r, do
 EZRA CATTELL, Secretary, Harrisville.

The officers elected in 1850, were —

JOHN HAVERFIELD, President, Cadiz.
JOSEPH COPE, V. P., Short Creek.
AB'HM HOLMES, Treas'r, do
E. CATTELL, Secretary, Harrisville.

The officers at the present time (1851) are —

JOHN HAVERFIELD, President, Cadiz.
JOHN S. LACEY, V. P., Laceysville.
ISAAC THOMAS, Treas'r, Short Creek.
E. CATTELL, Secretary, Harrisville.

The above is a correct list of the officers of this Society, since its organization.

[The managers' names were also sent, but are not here inserted.—W. W. M.]

The money in the hands of our county Treasurer, due State Board, is \$9 50, which is from a tax on shows. There have been no escheated lands in the county since the passage of the law referred to in your circular.

We believe there has been a gradual and steady improvement in the agriculture of our county since the organization of the society. Farmers and mechanics seem to be more interested in their different occupations than formerly. Their assembling together to see the annual exhibition of the fruits of their labor, skill and industry, has a tendency to show them the important and honorable place they occupy in the community, and to convince them, that but for them and their labors, manufactures and commerce must languish, and the progressive march of society must be stayed. Consequently, the interest in the society has steadily increased.

The recent annual Fair, we believe, was the largest, most spirited and interesting ever held in the county.

The number of horses entered, was 68; of cattle, 35; hogs, 23; sheep, 117; showing a decided increase over previous years.

The amount awarded in premiums, was about \$275, as follows: In premiums on farms, \$7; on horses, \$47; on cattle, \$30; on swine, \$12; on sheep, \$30; on plowing, \$14; on farm implements, \$13; on mechanic arts, \$35; on domestic manufactures and dairy products, \$51; on crops, \$30.

Statements of Competitors for Premiums on Crops.

Joseph Holmes' statement in relation to his corn crop, which took the first premium:—

The corn grew on bottom land, which had not been plowed for a number of years; the soil is known as black walnut and sugar tree soil. It was plowed in March, from 8 to 10 inches deep, and harrowed twice and cultivated once, before planting; it was marked out 3 feet 10 inches one way, and was planted in hills, one foot apart in the rows, and but one stalk left in a hill. It was worked twice with the cultivator and twice with the double shovel plow, and was hoed after the plow, both times.

Estimate of the cost of Raising the Crop.

To plowing one acre.....	\$1 50
Harrowing and cultivating.....	75
Marking and planting.....	1 00
Cultivating, plowing and hoeing.....	3 00
Gathering crop.....	1 00
Total cost.....	<u>\$6 25</u>
	Cr.
By 94 bushels corn at 33 cents per bushel.....	\$31 02
Deduct cost.....	6 25
Net profit.....	<u><u>\$23 77</u></u>

Peter Randolph's Statement of one Acre.

The soil was ash and hickory; plowed April 25.

Expense of Culture.

To one day's plowing and harrowing.....	\$2 00
One day's planting, &c.....	75
Four days plowing and hoeing.....	3 00
Gathering crop.....	1 00
Total cost.....	<u>\$6 75</u>
	Cr.
By $85\frac{2}{3}$ bushels corn at $33\frac{1}{2}$ cents per bushel.....	\$28 38
Deduct cost.....	6 75
Net profit.....	<u><u>\$21 63</u></u>

M. T. Johnson's Statement concerning his Wheat crop of five Acres.

The land upon which the wheat grew had been in sward 5 years, and was plowed in 1850 and planted in corn; it was well tended, and produced not much less than 100 bushels to the acre. Amongst the standing corn, about the 20th of the 9th month, 1850, six bushels of Mediterranean wheat was sown, making about 72 lbs. per acre; it was put in by running a double shovel plow, twice in a row, and a cultivator once in a row, the same way.

The field is oblong, and one side is bounded by thick woods, which materially injured one-fourth of the crop. A part near the house fell down early and was entirely destroyed by poultry; but the entire field was included in the survey; the produce was 142 bushels.

Statement of John Singer's Oat Crop.

The field was in corn last season; about one half of it was manured before planting the corn; the field contained six acres and 92 rods; one team was six days plowing and harrowing in the oats; there was 20 bushels of oats sown on the field, or about three bushels per acre, and the produce was 450 bushels, or $68\frac{1}{2}$ bushels per acre.

Walter Jamison's Statement of his crop of Timothy Seed.

The land was in wheat in 1850; I sowed 5 quarts of timothy seed per acre, on the wheat after it was harrowed in; there was, at one time, a road running through the lot. The soil is, part of it, red lime stone, part white clay, and some gravel.

I cut the seed when ripe, bound it in small sheaves and let it stand some weeks in the field to rot, but the season was so dry that I think one-fourth of the seed was left on the straw; it was threshed with a flail. I had from one acre and twelve rods, six bushels and four quarts of pure seed — equal to $5\frac{7}{8}$ bushels per acre.

Expense of Culture.

To one day's cutting and binding	\$1 00
One-fourth day's hauling in	62
Two day's threshing and cleaning	1 50
Total cost	<u>\$3 12</u>
	Cr.
By $6\frac{1}{2}$ bushels seed, at \$2 per bushel	\$12 25
Deduct cost	<u>3 12</u>
Net profit	<u>\$9 13</u>
Net profit per acre, \$8 50.	

Ingram Clark's Statement in relation to his Potato crop on one-fourth acre.

The ground is a clay soil, and was in potatoes last year; part of it was limed, at the rate of about 100 bushels to the acre, the remainder manured from the stable. There appeared to be no difference in quantity or quality, of the part which was manured and that which was limed. The potatoes were planted about the last of April, in hills, three feet and a half apart, each way; were plowed three times and hoed twice.

Expense of Culture.

Three eighths of a day plowing, harrowing and furrowing.....	56½
Half day planting.....	37½
One-fourth day plowing three times.....	37½
One day hoeing.....	75
Two days digging.....	\$1 50
Two and three-fourths bush. seed.....	2 37½
Total cost.....	\$5 83½
	Cr.
Fifty bushels potatoes at 50 cents.....	\$25 00
Deduct outlay.....	5 83½
Net profit.....	\$19 16½
Net profit per acre, \$76 65.	

John S. Lacey's Statement of his-crop of Corn and Potatoes— Fifty-five rods.

I hauled sufficient manure on the ground to put it in good order, and then planted the corn and potatoes in alternate rows.

Expense of Culture.

Manure and hauling.....	\$1 50
Plowing, harrowing and planting.....	2 00
Twice dressing, with plow and hoe.....	2 00
Digging and housing.....	1 50
Gathering corn.....	50
Five bushels seed.....	2 50
Total cost.....	\$10 00
	Cr.
By 62 bushels potatoes at 50 cents.....	\$31 00
Fifteen bushels corn at 33½ cents.....	5 00
Value of crop.....	\$36 00
Deduct cost.....	10 00
Net profit.....	\$26 00
Profit per acre, \$75 64.	

John S. Lacey's Statement of his Sweet Potato Crop: One-fourth of an acre.

I hauled, and spread over the ground, stable manure sufficient to put the ground in good order. I then hauled from the creek, some four or five loads of loam sand, and spread on the ground. Then plowed and harrowed once. Then, with the plow, put in ridges, and dressed the same with hand-hoe, and planted the sets on the top of the ridges. During the progress of cultivation, the shovel-plow was run twice between the rows, and they were twice dressed with the hand-hoe.

Credit, By 75 bushels sweet potatoes, at 75 cents		\$56 25
Debtor, To hauling manure and sand.....	\$3 50	
To plowing, harrowing, preparing beds and planting	3 50	
To twice dressing	3 00	
To digging and housing	3 00	
To three pecks of seed.....	3 00	
		<hr/> 16 00
Balance net profit		<hr/> \$40 25

Showing a net profit of \$161 per acre.

The one crops were all measured, and sworn to according to law, except the last above. It was estimated by measuring two rows, which produced seven bushels, and as there were $21\frac{1}{2}$ rows in one-fourth of the acre, it would make $75\frac{1}{2}$ bushels, or 301 bushels per acre. Although it was undoubtedly a good crop, no doubt but the estimation is nearly correct; yet, as the whole produce was not measured, no premium was paid on it.

We send the following receipts for making butter:

To make first premium fresh Butter.

The milk from which this butter was made, was kept in a spring house. The cream was churned about fifteen minutes, at about sixty degrees of heat.

The butter was made of sweet cream, not over four days old, salted, and thoroughly worked once.

ANNA M. FOX.

Premium Butter for July and September.

The cream managed in the ordinary way, standing until it is sour, then churned. As soon as the butter is gathered, lift it from the churn, and press with the ladle as much of the milk from it as possible. Then salt it with pulverized salt. Let it stand until it is cool, and then work it until it is solid. Let no water touch butter, if you want to keep it sweet, and not to have it look greasy. Then pack it into a stone jar. Having to churn twice to make ten pounds, keep one churning covered

with a piece of muslin, dipped in melted butter, until the other is put in. Then put the rag on the top of the butter, place the lid on, and seal it tight, with grafting wax, to keep out the air.

Cream for fresh butter, is managed in the same way, and the butter salted with pulverized salt, and work the milk from it without water.

ANNA J. LACKEY.

In regard to the proceedings of the society, we suppose they will be sufficiently gathered from the above.

The number of members, at present, is about 120, and the prospects for usefulness are brighter than ever before.

The kind of crops are the same as reported in former years. You will learn the true amount of the corn and wheat crops in the county, last year, by the reports from the Auditor's office. We suppose the corn crop of the county is about one-fifth lighter than last year. The wheat crop is, likely, some less than last year. The oat crop is considerably better. Potatoes not so good. Apples and other fruit, nearly a failure. Clover is much better than last year; and other crops are about the same.

We have no data, at present, to enable us to estimate, to any certainty, the average yield per acre.

The current price of wheat is about fifty cents per bushel. Corn from thirty-three and one-third to thirty-five cents. Oats, 25 cents. Potatoes from forty to fifty cents. Clover-seed from \$4 50 to \$5. Timothy-seed, \$2 to \$2 25. Apples, \$1 50 to \$2 per bushel. Hay from \$5 to \$7 per ton. The produce is purchased by the merchants in the different neighborhoods.

Very respectfully submitted,

JOHN HAVERFIELD, President.

EZRA CATTELL, Secretary.

TREASURER'S REPORT.

Financial Condition of the Harrison County Agricultural Society, on the 11th of December, 1851.

Funds in the hands of the treasurer, since 1850.....	\$27 12½
Received of 144 members.....	144 00
Received of County Treasurer.....	100 81
Received at the Fair.....	28 60
Whole amount received.....	\$300 53½
Amount paid for premiums.....	\$191 95
Amount paid for printing, and other expenses.....	41 15
Amount paid out.....	\$233 10
Amount of cash on hand.....	67 43½
	<u>300 53½</u>

Premiums not paid this year, 1851.....	\$64 00
Do do for 1850.....	21 87½
Do do for 1849.....	24 00

ISAAC THOMAS, Treasurer.

A considerable portion of the back premiums will never be called for.

HIGHLAND COUNTY.

Annual Report of the Highland County Agricultural Society for 1851.

The affairs of the society are in a more prosperous condition than at any former period. Public interest, in its success, has greatly increased. The attendance was ten-fold greater than at any previous fair. The exhibition of fine stock was rendered more interesting by the increased number of competitors. The exhibition of agricultural products, agricultural implements, and other manufactured articles, was also highly creditable.

The premium for the largest crop of corn was awarded to James Johnson, for 106½ bushels per acre; the ground measured, and corn shelled. John M. Nelson reported 107 bushels per acre, and John A. Trimble 105 bushels per acre—measured in the ear.

No wheat crop was exhibited for the premium.

The premium on oat crop was awarded to J. D. Patton, for sixty-two bushels per acre.

The premium on sweet potato crop was awarded to Samuel Coffin; 30 rods produced 80 bushels of merchantable potatoes, or at the rate of 426½ bushels per acre; eight additional rods, gathered to come within the rule of the society, yielded but eight bushels. The latter were planted late, and affected by the drouth. As Mr. Coffin is an experienced cultivator, his mode of culture is given:

“Potatoes put in a hot-bed from the first to the tenth of April. Hot-bed made of fresh stable manure, one foot deep, placed on top of the ground, say five feet wide, and as long as you want the bed. Level the manure on the top, and press, or pat it down, with spade or shovel. Cover the manure with one inch in depth of light, rich soil. Spread the potatoes on the top of this earth as thick as they can be without touching, and cover them with one inch in depth of light, rich earth. Bank up the earth against the sides and end of the bed. Plant with sprouts about the middle of May; plants to be set one foot apart, the root end to be sunk about two inches, and the plant laid in an inclined position, leaving out none but the leaf end. Plant in ridges four and a half feet apart, from centre to centre, made by

throwing four furrows together, in ground previously well plowed and pulverized. Plow potatoes three times, four furrows between the rows, with large plow, and one horse attached. Hoe three times, and afterwards pull out the weeds that may appear among the vines. Potatoes to be dug from the first to the middle of October. After digging, they are placed in barrels or boxes, in the cellar, with dry earth, chaff, or straw, over the top, to prevent wilting. Stove heat used in cold weather. They can be kept in the same manner, in a room where the heat is sufficient to prevent their being chilled."

No new discoveries have been made in agriculture or manufactures in the county during the past year. Various experiments have been made with charcoal during the past season, all of which have been successful; but they have not been presented in a tangible form. An application of leaf mould and pulverized charcoal, made by me, in planting some fruit trees, resulted in a very vigorous growth of the trees.

The financial condition of the society will be seen from the following statement:

Funds for the year 1851.....	\$490 25
Amount paid in premiums, and preparations for Fair	266 40
Leaving a balance in the treasury of.....	<u>\$223 85</u>

At an election of officers for the ensuing year, Wm. H. Trimble was elected president, John Dill, secretary, Wm. H. Woodrow, treasurer.

The society was organized in 1849.

No escheated lands have been reported for this county. The amount due the State Agricultural Fund, from permits to shows, for the year 1851, is forty dollars.

WM. H. TRIMBLE, President.

HOLMES COUNTY.

Report of the Condition of Agriculture, &c., of Holmes County for the year 1851.

1. **PRINCIPAL CROPS**—Wheat, Corn, Oats, Hay and Clover Seed.
2. **WHEAT**—Average yield per acre 20 bushels. Varieties, White Garden, White Blue Stem, Mediterranean, and a variety called, by our farmers, Lancaster. Wheat is principally marketed at Massillon, and other adjacent points on the Ohio canal. Present price, from 62 to 65 cents.
3. **CORN**—Average crop this year from 20 to 25 bushels per acre. Variety, yellow and white; mostly used in making pork; average price, 37½ to 50 cents.
4. **OATS**—Average yield 40 bushels to the acre; usual price, 25 cents per bushel.
5. **RYE AND BARLEY**—Very little grown in the county.

6. **GRASS AND HAY**—The usual yield 2 tons per acre. Price, from \$5 00 to \$6 00 per ton.

7. **ROOT CROPS**—Potatoes, average yield per acre 100 bushels ; much injured this year by a bug that eat the tops. Turnips, field beets, carrots, &c., not raised extensively.

8. **FRUIT**—The character of the fruit is good ; the various crops were almost an entire failure this year, in consequence of late frosts.

9. **SEEDS**—A large amount of clover seed is annually raised in the county ; yield, per acre, 2 bushels ; worth \$5 00. Timothy seed is scarce, worth \$1 50. Very little flax seed raised.

10. Such as hemp, castor beans, &c., not grown.

11. **DAIRY PRODUCTS**—A large amount of butter manufactured. Native cows are principally used ; a few Devons and Durhams have been introduced within the last year or two.

12. **SHEEP AND WOOL**—Our farmers are turning their attention to the growing of wool, which has been much neglected heretofore ; many fine wooled Saxons, Merinoes, &c., introduced within the last year.

13. **PORK**—Not much improvement in the breeds ; there are, however, some good in the county.

14. **HORSES**—A large number annually sold and driven to the Eastern market ; the stock is generally good.

15. **IMPLEMENTS**—There is none manufactured in this county. The Wheat Separator and Thresher is generally used. The plows, harrows, &c., are of the usual kinds.

16. **OTHER IMPLEMENTS**—None.

17. **MINERALS**—Our county abounds in coal and other minerals ; they are not worked extensively, however.

18. **MILLS**—No mills in our county do merchant work to any extent ; they do principally, custom work, but make very good flour.

19. The law relating to public shows has been enforced, and the amount collected this year is \$60 00.

There is no escheated lands in the county.

MILLERSBURG, Nov. 16, 1851.

To M. L. SULLIVANT, *President Ohio State Board Agriculture* :

SIR—In compliance with law, and the regulations of the Ohio State Board of Agriculture, the Board of Managers of the Holmes County Agricultural Society, report, that on the 4th day of July, 1850, the organization of this society was completed, in accordance with the law "for the encouragement of Agriculture," passed February 27, 1846.

This society held its first annual Fair at Millersburg, the 16th and 17th days of October, 1851.

The society now numbers one hundred and twenty-one members, all of whom have paid their annual fee of one dollar.

Abstract of Treasurer's Report.

	Dr.		Cr.
Received from members of the society as annual fees.....	\$121 00	Paid out on Premiums.....	\$98 50
Received from county Treasury.....	88 00	Premiums awarded, for which orders have been issued, but not yet presented for payment.....	17 00
Total	\$209 00	Incidental expenses	75
		Total	\$116 25
		Balance in the Treasury	92 75
			<u>\$209 00</u>

The first premium on Oat crop was awarded to Samuel Moorhead, for 136 bushels of Oats grown on $2\frac{2}{3}$ acres; a clay soil mixed with sand, sloping to the north; was worked in corn on a stiff sod the season of 1850; no manures; sowed about three bushels to the acre, 18th of April, 1851; harrowed twice, harvested as soon as ripe; the variety was the white side oats.

The first premium was awarded to Abner Purdy, for the largest crop of Hay raised on one acre, situated on the Kilbuck bottom; the land was seeded with red top; never plowed; has been mowed for sixteen years; mowed close, believing that the rays of the sun penetrating the roots kills the moss, and pastured by sheep during the fall and winter.

The following is Mr. Purdy's statement of the manner of harvesting, expenses, &c.:

Quantity mowed, 4 tons 100 pounds off one acre, worth \$5 per ton	\$20 25
Expense of cutting and putting up	\$3 00
For use of land	5 00
	<u>\$8 00</u>
Net profit per acre.....	<u>\$12 25</u>

The society held its annual election on the last day of the Fair, at which time the following officers were elected for the ensuing year :

JOSHUA R. BUCKMASTER, President, Millersburg.
 EBENEZER BIGHAM, Vice President, Monroe Tp.
 ALFRED H. SMITH, Secretary, Millersburg.
 JOHN CARY, Sr., Treasurer, do

The officers elected at the organization of the Society, and whose terms expired this year, were—

JACOB VORHEES, President.
 ANDREW NIXON, Vice Pres't.
 JOSEPH MCKINLEY, Secretary.
 S. C. BEVER, Treas'r, who resigned, and
 JOHN CARY was appointed in his place.

[Managers' names omitted.]

JOSHUA R. BUCKMASTER, *President.*

A. H. SMITH, *Secretary.*

HURON AND ERIE COUNTIES.

Report of the President and Secretary of the Huron and Erie Counties Agricultural Society.

To the State Board of Agriculture :

GENTLEMEN: In compliance with the requirements of the law of February 27th, 1846, "for the encouragement of agriculture," we respectfully submit the following report:

This society was organized March 15, 1848. In the first year of the society, there were 150 members, who paid the annual fee of \$1. The amount paid for premiums was \$166 25. The officers for that year were—

President—PLATT BENEDICT, Norwalk.
Vice President—CHARLES HINE, Berlin, Erie co.
Treasurer—THEODORE BAKER, Norwalk.
Secretary—BENJ. BENSON, Townsend, Huron co.

In the second year of the society (1849), the number of members who paid the annual fee was 140, and there was expended for premiums, \$209.

The officers for the year were—

President—PLATT BENEDICT, Norwalk.
Vice President—CHARLES HINE, Berlin.
Treasurer—THEODORE BAKER, Norwalk.
Secretary—BENJAMIN BENSON, Townsend.

In the third year of the society (1850), there were 172 members who paid the annual fee, and there were expended for premiums, \$313 25.

The officers for the year were—

President—PHILO ADAMS, Huron.
Vice President—THOMAS CLARY, Monroeville.
Treasurer—THEODORE BAKER, Norwalk.
Secretary—E. M. BARNUM, do

For the present year, the number of members who have paid the annual fee is 308. The amount offered for premiums is \$555, and the amount awarded for premiums, to be paid at the annual meeting on the third Tuesday in January, is \$446 50. This does not include the premiums offered on grain crops, which are to be awarded at the annual meeting in January.

Officers of the society for the present year—

President—PHILO ADAMS, Huron.
Vice President—ISAAC T. REYNOLDS, Huron.
Treasurer—MORGAN STUART, Milan.
Secretary—LUKE S. STOW, “

The society is flourishing, and there has been a steady increase of interest in its operations from its first organization; and the result of the late fair shows that a rapid improvement is yearly being made in every department of agriculture in our district. The number of entries of different articles and animals at the fair, were over 500. Our farmers are making greater exertions to improve their breeds of cattle, horses and sheep, than ever before. The same may be said in regard to their crops, though there does not appear to be quite so manifest an improvement as in raising stock.

The wheat crop was very good this year, and is thought by many to be fully equal to that of last year. The quality is superior, and there was but little injury received from the insect or from rust. The average yield is about 25 bushels per acre. Average price 70 cents. The kinds most commonly raised are the “Soules,” the “White Blue Stem,” and the “Improved White Flint.” Farmers generally are rejecting the varieties of red wheat, as their price is usually from 3 to 5 cents per bushel less in market than the white. We have no means of forming a correct estimate of the aggregate amount of the crop in the district, probably 750,000 bushels.

Corn, next to wheat, is the most important crop of our district. The average yield this year is less than for 3 or 4 years past, perhaps 30 or 35 bushels per acre. The spring was very wet at the time of planting, and the farmers were very late in getting their corn into the ground, so that a large proportion of the crop was not ripe when the frost came this fall. The average price this year is 40 cents per bushel.

The oat crop is better than last year. The average yield is 35 bushels. Average price 25 cents. Small quantities of barley are raised. The average yield is 25 bushels per acre, and the average price 60 cents.

The potato crop is light this year. More acres were planted than usual, but the yield is small. Potatoes have not been troubled with the rot as much as some years past. Average price 50 cents per bushel.

Raising tobacco is becoming quite a business with some of the farmers in this region. There were 115 acres planted in the district, and the average yield is 1,500 pounds per acre. The average price is 8 cents per pound.

The quantity of wool produced in the district makes it an item of importance in the income of our farmers. There is a gradual improvement in the quality, as many farmers are taking great pains to improve their flocks by importations of finer breeds. The probable aggregate amount this year is 350,000 pounds. Average price 40 cents per pound.

The foregoing are estimates of a few of the most important productions of the district represented by the society. We would suggest whether it would not be desirable to have it made a part of the business of the township assessors to collect and return the amount of stock, grain, fruits and vegetables produced in the townships each year.

The amount to which the State Board is entitled out of permits for shows, paid into the county treasury of Huron, is \$50; paid into the county treasury of Erie, \$31 50.

There are no escheated lands in either county reported.

We transmit with this a printed copy of the premiums offered by the society, and a copy of the premiums awarded; also, the treasurer's report for the current year.

P. ADAMS, *President Huron and Erie Co. Ag. Soc.*

L. S. Stow, *Secretary.*

Annual Report, for 1851, of the Treasurer of Huron and Erie Counties Agricultural Society.

Huron and Erie Counties Agricultural Society in account with Treasurer:

	Dr.		Cr.
To cash received of late treasurer.....	\$147 44	By amount paid for premiums	\$52 75
To cash received from Huron county treasurer	97 00	By amount paid Mills for printing pamphlets	24 00
To cash for fees of members.....	308 00	By cash paid for expenses of fair.....	179 08
To cash for tickets sold at fair (not members).....	191 00		
To cash for Milan subscription.....	141 00		
	<u>\$864 44</u>		<u>255 80</u>
		Balance on hand in treasury, at date.....	<u>\$628 64</u>

M. STUART,
Treasurer Huron and Erie Co. Ag. Soc.

Statement of a crop of wheat raised by me in the year one thousand eight hundred and fifty-one, in the township of Kelley's Island, Erie county, Ohio.

1st. The land on which this wheat was raised ($6\frac{2}{3}$ acres, certified by A. S. Kelley, surveyor), has been in wheat, corn or potatoes, for the previous nine or ten years, has never had a load of manure of any description put on it. It has been lightly subsoiled twice, once for the corn crop raised on it last year, and once the year before for a crop of corn and potatoes.

2d. The soil is clay limestone, quite level.

3d. The quantity of seed used was nine bushels of white variety.

4th. Sowed the 21st of September. The corn was cut and drawn off, the seed sown without plowing—harrowed in. It was only harrowed in one way, being prevented by rain from further labor.

5th. Expense of cultivation, being as follows:

2 days of man and team, harrowing	\$2 50
$\frac{1}{2}$ day draining	63
1 day, man, digging turf from stump	75
1 day, self, sowing, say	1 00
	<hr/>
	\$4 88

Yield, 241 bushels. Cost per bushel, 2 cents.

Add 9 bushels seed, raised in same way..... 6 75

\$11 63

Sowed by hand, harvested with a cradle, raked and bound by hand, threshed and cleaned with a common threshing machine (eight horse power), measured in half bushel as it came from the separator, probably good measure; worth $87\frac{1}{2}$ cents for seed.

ADDISON KELLEY.

KELLEY'S ISLAND, Oct. 20, 1851.

W. W. MATHER—SIR: Enclosed are the documents that are to accompany the wheat I left at Columbus during the State Fair last September. I see by the rules and regulations for the fair, that it only requires an account of the labor of raising, and that cheapness of culture is an important item in adjudging premiums. I will add some further remarks. It will be seen by the report that the cost of cultivation is \$4 88; yield 241 bushels, costing 2 cents per bushel; add seed, 9 bushels, raised same way, say, \$6 75; seed and cultivation less than 5 cents; 16 days, men, harvesting and housing, \$12; cost in the barn $9\frac{2}{3}$ cents (nine cents and eight mills). It was threshed by machine, and it is difficult to determine the cost.

I left the wheat in charge of J. L. Bates, Esq., of Columbus, who will have it when the committee are done with it.

Yours, respectfully,

ADDISON KELLEY.

The above is properly vouched according to law.

Statement of Premium Oat Crop.

Oats raised by Benjamin B. Jackson, of Ridgefield, Huron county, Ohio, in 1851.

Previous crops, corn and oats, successively for eight years. Soil, prairie. One mile west of the Huron river. Never manured, but ploughed in the fall. Quantity of seed, 3 bushels. Sowed the last of April. Harvested in August. Threshed the first of September. Sowed broad-cast and dragged. The expense of putting in the seed, \$1 50 per acre; harvesting, \$2 25 per acre; threshing and hauling to market, Milan, Erie county, \$2 20. Quantity raised, $72\frac{2}{3}$ bushels.

I hereby exhibit one barrel as a sample of the crop.

BENJAMIN B. JACKSON.

Ridgefield, Sept. 19th, 1851.

$72\frac{2}{3}$ bushels per acre. 1st premium on oats awarded by the Ohio State Board of Agriculture.

The above statement is vouched according to law.

W. W. MATHER.

J E F F E R S O N C O U N T Y .

The Jefferson County Agricultural Society was organized at Smithfield, in the 11th month, 1848. The election of officers took place at the same place, on the 1st month, 6th, 1849, with the following result :

JOSEPH H. COPE, President.
 RICHARD TALBOTT, V. Pres't.
 THOMAS WOOD, Treasurer.
 JAMES A. MCGREW, Secretary.

Second election, Smithfield, 11th month, 16th, 1849, as follows :

JOSEPH H. COPE, President.
 GEO. McCULLOUGH, V. Pres't.
 ANDERSON J. MCGREW, Sec'y.
 THOMAS WOOD, Treasurer.

Third election, 10th month, 19th, 1850, as follows :

GEO. McCULLOUGH, President.
 RICHARD TALBOTT, V. Pres't.
 A. J. MCGREW, Secretary.
 THOMAS WOOD, Treasurer.

Fourth at Richmond, on 10th month, 17th, as follows :

GEO. McCULLOUGH, President.
 RICHARD TALBOTT, V. Pres't.
 JAMES D. LADD, Secretary.
 THOMAS WOOD, Treasurer.

Report on Premiums.

The following premiums on farms, awarded by the Jefferson County Agricultural Society, at its third annual Fair, were reported to the Secretary since the publication of the general list, also the abstract of Treasurer's account as given below.

Best managed farm, taking into consideration neatness, economy, preservation of, and addition to fertility, in short, preferableness, present and prospective, George Hammond, Springfield	\$8 00
Second best, John Jones, Smithfield	6 00
Third best, M. L. Rinehart, Island Creek township	4 00
Fourth best, Benjamin Rex, Richmond	3 00

Treasurer's Report, for 1851.

RECEIPTS.

Received of members, cash	\$225 00
Received of County Treasurer	145 00
Total receipts	<u>\$370 00</u>

EXPENSES.

Cash paid on premiums	\$279 00
Cash paid for rope	20 00
Cash paid for printing	23 00
Cash paid for labor preparing grounds for exhibition	5 75
Cash paid for diplomas and postage	9 00
	<u>\$336 75</u>
Balance on hand	<u>\$33 25</u>

GEO. McCULLOUGH, *President.*

THOMAS WOOD, *Treasurer.*

JAMES D. LADD, *Secretary.*

Richmond, December 11, 1851.

KNOX COUNTY.

To the State Board of Agriculture :

GENTLEMEN — Accompanying this, we present the third annual report of the Knox County Agricultural Society, consisting of the entire report of the proceedings of the Society, at the third annual Fair, on 2d and 3d days of October, A. D., 1851 ; the list of premiums awarded, the able letter of Israel Dille, Esq., the names and residence of the officers elected for the ensuing year, the award on grain, with details of culture, expense, &c.

Our society is prospering, and the interest in its welfare has greatly increased since our last report.

At our third Fair the entries were more numerous ; the number of people in attendance much greater ; and the display of articles for exhibition, especially on the second day of the Fair, much better than heretofore. The ladies' department merited much commendation ; their household manufactures, ornamental needlework, and floral exhibition, were the admiration of all the people present at the Fair. The great improvement made in stock, agricultural implements and other branches, more than compensates for all the time, labor and expense put forth for this society.

The farmers and producers of old Knox are now awake to their own interests, and regard this society as chiefly instrumental in promoting their present prosperity and advancement.

Respectfully yours,

A. BANNING NORTON,

Sec'y Knox Co. Ag. Soc'y.

The late Treasurer of this society, M. M. Beam, having failed to make his report as required by our law, and not having effected a settlement, as yet, we can only estimate the amount of money in the Treasury at about \$153 00.

The names and Post Office address of the officers of the Knox County Agricultural Society, are as follows :

HON. WILLIAM BYRNS, President, Mt. Vernon.

B. F. SMITH, Mt. Vernon,	} Vice Pres'ts.
JAMES ELLIOTT, Martinsburg,	
WM. BABCOCK, Ankenytown,	
MARVIN TRACY, Millwood,	
JOSEPH DERRY, Mt. Liberty,	

A. BANNING NORTON, Recording Secretary, Mt. Vernon.

E. ALLING, Corresponding Secretary, do

H. P. WARREN, Treasurer, do

WILLIAM BONER, Mt. Vernon,	}	Executive Committee.
ASAHEL ALLEN, do		
J. N. BURR, do		
ISAAC BELL, Martinsburg,		
BENJ. TULLOSS, do		
MARDENBRO WHITE, Gambier,		
JOB RUSH, Mt. Vernon,		
DANIEL McGRADY, Mt. Vernon,		
HUGH OGLEVIE, do		

Annual Meeting of the Knox County Agricultural Society, October, 1851.

The third annual meeting and fair of the Knox County Agricultural Society was held in the town of Mount Vernon, on Thursday and Friday, the 2d and 3d days of October, A. D., 1851.

The Society convened at the Court House on the 3d inst., at 1 o'clock, P. M., for the transaction of business, and was called to order by the President, William Boner, Esq., of Morris township.

The first regular business being the election of officers, as prescribed by the constitution, on motion of B. F. Smith, Esq., a committee of three persons was appointed to report to the Society the names of suitable members to act as officers for the ensuing term.

Dr. J. N. Burr, Judge Elliott, and Gen. Bevans were constituted said committee.

The committee having retired, the Secretary was called upon to make report as to what had been done towards procuring a speaker to deliver the annual address. whereupon he read the following communication from Israel Dille, Esq., of Licking county :

NEWARK, September 23, 1851.

A. BANNING NORTON, Esq. — *Dear Sir* : Your note of the 21st, inviting me to address the Knox County Agricultural Society on the 3d prox mo, was laid upon my table last evening. Having just risen from a sick bed, with accumulated calls upon my time, precludes me from complying with your request. This I very much regret, inasmuch as I take a lively interest in the productive industry of our common country, and feel it my duty, as well as my interest, to promote it by every exertion I am capable of making.

The only real increase of the wealth of the world is by productive industry. Commerce adds nothing to the general wealth, it only disseminates and makes more available the products of labor. But the cost of commerce is all at the expense of industry, or rather of the producer. Hence, in the old world, where monopolies and privileged orders exist, the laborer who produces, is almost universally poor, whilst the merchant who buys and sells the products of labor, amasses a princely fortune. Commerce is the handmaiden which receives from the producer and conveys to the consumer, and as the distance between the producer and

consumer is increased, the producer must receive less for his labor and the consumer must pay more; commerce taxing in proportion for transportation, hazards and profits. For instance, if our market for the products of Agriculture be in Europe, if there we are to sell our pork, our beef, our flour, corn and wool, the distance is so great, and the hazards so numerous, the expenses so heavy that the home producer must expect a very low price, and the foreign consumer must pay a high price, whilst the merchant who purchases from the one and sells to the other, must realize profits to the amount of capital invested and all the risks incurred, with ample compensation for his time, to induce him to engage in the business. This is no theory. The experience of the world, from the days of Tyre to the present, attests the truth of this position.

Hence it is the interest of every producer and consumer to live as near each other as possible. But we are all consumers, though we are not all producers, and yet in a country so productive as ours we have not consumers enough. If we could balance society aright, so as to produce within and among ourselves all that we consume, it would reduce the aggregate of labor at least one half or quite double its profits.

You have in your county a large woolen factory and several iron foundries. Let us imagine that these manufactories were so increased in number and variety as to consume all the surplus products of your farms in Knox county, and the people of your county should consume a large portion of the fabrics of these manufactories, both receiving a portion, say 10 per cent. of what is now paid for transportation, who cannot see how much your people would be benefitted by such a condition. Extending these views but a little farther, we readily perceive that with the varied climate, soil and seasons of our common country, how independent we might be in these United States if we would follow these great cardinal truths.

But there is another point of view in this connection that brings this subject directly home to the farmer. That is the impoverishing of his soil, by carrying their products abroad. The loss in the soil for a single year seems hardly appreciable, yet we have scarcely any soil that if not renewed or restored that will not become barren in twenty or thirty years. And why? Because every crop takes away its bulk and considerably more of the elements of fertility of your soil and commerce conveys it to a distant quarter of the globe. Take the most productive soil, analyse it and its organic elements are found in 100ths or 10ths at most, which but a few years are sufficient to exhaust. The southern States, whose products have entered most largely into foreign commerce, attest the truth of this position. Even in the new States of Mississippi and Arkansas, many farms are exhausted and abandoned, whilst in all the older states a very large proportion is in that condition.

Hence we see it is the interest of the farmer and of the community at large that our products be more varied. Our agricultural staples, our wheat and corn and the animals fed upon grass and fattened upon the latter grain. The general or average prices of these products are so low among us that they are scarcely remunerative.

Neither the individual or the community is interested in materially increasing these products, unless it can be done at a considerable reduction of cost. At the present time we are really burdened by the quantity of the cereal grains in the country. We want a market—we want consumers who can afford to pay a remunerative price for our provisions. For it is a fact worthy of great consideration, that whilst labor is better paid in the United States than in any other country in the world, the product of labor, and of agricultural labor especially, command a lower price here than anywhere else. This argues something wrong in our general, or perhaps it might be called our political economy. The laborer in this country receives double the wages he could receive elsewhere, and the cost of a much more comfortable subsistence is less by one-half than it is in any other country. This is temporarily favorable to the laborer, but when he becomes himself a producer for his own benefit, he feels the great inconvenience of the general condition.

The great and desirable change cannot be brought about in a day. But a state of things is beginning to exist, that I trust will induce our farmers to vary their productions. Wool, within a few years, has been added to the catalogue of our staples, and may we not hope, that with the recent improvements in the working of flax and hemp, that these articles of prime necessity will be added to the culture of our fields and the elements of our wealth?

Our railroad will furnish facilities for carrying to market many minor articles of domestic production, which have heretofore been almost valueless. We trust a new impulse to industry and production will be awakened by this means, which will insure a wider and more general prosperity.

Labor in this country is not the mere servile toil of bone and muscle for a bare subsistence that characterizes it in all other countries. It is the exertion of force directed by intelligence, that intelligence makes the laborer feel that whilst he toils he is still a man, the image of his Creator; yielding obedience to that first and great beneficent law, that, "in the sweat of thy face shalt thou eat thy bread," and which, while it provides him comfort at the present, promises him independence in the future, and purifies his heart and elevates his nature.

I beg you, my dear sir, to tender my thanks to your committee for the honor conferred upon me, by this request, and hope at some future time I may be able to confer with your fellow citizens respecting our common interests.

I remain truly yours,

I. DILLE.

On motion of Rev. M. E. Strieby, the letter of Mr. Dille was ordered to be published with the proceedings of the meeting.

Knox County Agricultural Society.

At a meeting of the Board of Managers of the Knox County Agricultural Society at the Court House, in Mount Vernon, on Saturday, Nov. 15th, 1851, at 2 o'clock P. M., a premium of four dollars was awarded to H. H. McArtor, Esq., of

Howard township, for having raised the largest quantity of corn upon one acre. The following statement complying with the requisitions of the society, was, on motion, ordered to be published in connection with the award :

To the Knox County Agricultural Society:

I do hereby certify that I planted two acres of ground in yellow corn, last spring, on the farm of H. P. & S. P. Warden, in Howard township, Knox county, Ohio. The ground is bottom land, has been cleared about twenty years, has laid uncultivated until the year 1850, it was planted in castor beans, it was plowed to the depth of one foot, furrowed and planted three feet one way and eighteen inches the other, plowed and harrowed three times during the summer. The hills contained alternately two and three stalks. About the 25th of October, I had one acre measured, from which I gathered five wagon loads and six barrels, each wagon load measured twelve and a half barrels, the barrel containing one bushel and 34-56 bushels of corn, making in all one hundred and ten bushels and 5-56 bushels of corn from one acre of ground measured.

H. H. McARTOR.

November 5th, 1851.

The Expense of Culture.

Plowing one day.....	\$2 00
Dropping seed, harrowing and covering.....	2 00
Plowing and harrowing.....	2 00
Harvesting.....	3 50
Interest on land.....	1 50
	<hr/>
	\$11 00
	<hr/>
110 $\frac{5}{8}$ bushels corn 30c.....	\$33 03
Deduct expense of culture.....	11 00
	<hr/>
Net profit on crop.....	\$22 03
	<hr/>

The yield of H. H. McArtor, Esq., is 110 $\frac{5}{8}$ bushels. The statement of Esq. McArtor will be read with interest by the friends of the Society.

By order of the Board.

A. BAN. NORTON, *Secretary.*

Vouched for according to law.

W. W. M.

LAKE COUNTY.

PRINCIPAL CROPS.—Corn, wheat, oats, barley, hay, with small amounts of rye, buckwheat, flax-seed, and grass-seed, together with green crops, potatoes, turnips, carrots, &c.

CORN.—The average per acre is from 45 to 50 bushels. Quality, generally first rate, but the past season has been unfavorable, the fore part of the summer being cold and backward. More than the usual quantity was planted last spring, but some fields were seriously injured, and others totally destroyed, by a severe hail storm that occurred on the 26th of July.

WHEAT.—Average yield, 12 to 15 bushels. The last crop was unusually good. The varieties mostly cultivated are the Mediterranean, Garden, Blue Stem, and Red Chaff.

OATS.—Usual average 30 bushels. The last crop was good, and they are generally considered a sure crop.

BARLEY.—Average, 30 bushels—not extensively grown.

HAY.—Average yield $1\frac{1}{2}$ tons per acre, in good seasons. The crop this year was much lighter, attributed in some measure to the drouth of last year, from which old meadows seemed not to have entirely recovered.

POTATOES.—Usual average 100 bushels. The last crop much affected with rot, and some fields destroyed by the hail storm.

FRUIT.—This crop is usually abundant, but was almost a failure this year.

DAIRY PRODUCTS.—The amount of butter and cheese exported is not known, but there is an increase in quantity, and improvement in quality.

CATTLE.—About 5,000 head are exported annually, at an average of \$25 per head.

There were no competitors for premiums on field crops.

C. B. SMYTH, *President.*

GEO. EVERETT, *Secretary.*

PAINESVILLE, Lake County, O., Nov. 25, 1851.

SIR: I herewith transmit such information as I have been able to collect, respecting the proceedings of the Lake County Agricultural Society for the year 1851, together with a statement of the principal kinds of agricultural productions, &c. The Society was organized in January, 1850, and arrangements made for a cattle show and fair, in the fall of that year, but owing to the excessive drouth of that season, and the ravages of the grass-hopper, whereby the grass and hay crops were almost entirely destroyed, the fair was postponed.

The Society held its first annual Fair on the first and second days of October, 1851. The first day was devoted to the exhibition of agricultural and mechanical products, and the second to the plowing match.

The Treasurer's report, as published, is hereto attached.

The Fair was well attended, and the show, in nearly every department, excellent. A good degree of interest, and a commendable spirit of emulation and improvement was very generally manifested.

The annual meeting for the election of officers is holden on the second Monday in January, of each year. The officers for the current year are :

President—CHARLES B. SMYTH.
Vice President—ERASTUS CROCKER.
Secretary—GEORGE EVERETT.
Treasurer—CHARLES D. ADAMS.

Report of the Treasurer of the Lake County Agricultural Society, 1851.

RECEIPTS.

Amount received from members of the Society.....	\$131 00	
Amount received from County Treasurer.....	73 27	
		<u>\$204 27</u>

EXPENDITURES.

Amount paid out in premiums on orders.....	\$114 00	
do paid out for printing ".....	21 25	
do paid out for blank books ".....	2 50	
		<u>\$137 75</u>
Balance in Treasurer's hands		66 52
Outstanding orders.....		60 13
		<u>66 52</u>
Leaving a balance in the Treasury of.....		<u>\$6 39</u>

C. D. ADAMS, *Treasurer*.

Painesville, Nov. 21, 1851.

LICKING COUNTY.

To the Ohio State Board of Agriculture :

The President and Secretary of the Licking County Agricultural Society report as follows :

We held our fourth annual Fair on the 16th and 17th of October. The days were very fine, and there was a large number of the working men of our county present.

The Board of Directors had procured a beautiful piece of ground, about three acres, and surrounded it with a high, tight board fence, which seemed to add much to the appearance and interest of the Fair.

Members and their families entered the enclosure free of any charge, except that of membership ; others were charged 10 cents for each admission.

We think there is a decided improvement in the agriculture of our county, and as evidence of this, we will compare our late Fair with our Fair last year. Last year we had but 150 members—now 256 ; an increase of 106 over last year.

The exhibition of stock was much more numerous, and better than last year. There were 167 horses exhibited this year—last year but 85 ; this year 90 head of cattle—last year 60 ; about 200 head of sheep this year—last year about half the number.

The exhibition of swine was small, but an increase over last year.

The entries of products and manufactured articles were nearly double those of last year, except fruit, which, as it is known, was killed by the late frosts in the spring. There were, however, a few good apples, and some very fine specimens of grapes.

There is not a doubt but that our annual Fairs have been greatly beneficial to the various departments of labor in our county, and so far as we can learn, there is an increasing interest felt among the farmers on the subject of agriculture, and a determination on their part, to make greater improvements than they have heretofore done.

P. N. O'BANNON, *President.*

G. F. MOORE, *Secretary.*

The Licking County Agricultural Society was organized 1848, and the following are the names and post office addresses of the persons who have been its officers in each succeeding year :

1848.

T. W. WILSON, President, post office, St. Paul, Minesota, (formerly Newark, O.
H. C. TAYLOR, Vice President, post office, Granville, Ohio.
I. DILLE, Secretary, post office, Newark, Ohio.
E. S. WOODS, Treasurer, post office, Newark, Ohio.

1849.

H. C. TAYLOR, President, post office, Granville, Ohio.
P. N. O'BANNON, Vice President, post office, St. Louisville, Ohio.
J. H. MOORE, Secretary, post office, Newark, Ohio.
H. S. SPRAGUE, Treasurer, " " "

March, 1850, J. H. MOORE resigned, and G. F. MOORE was appointed Secretary by the Board of Directors.

1850.

H. C. TAYLOR, President, post office, Granville.
P. N. O'BANNON, Vice President, post office, St. Louisville.
G. F. MOORE, Secretary, post office, Newark.
H. S. SPRAGUE, Treasurer, Newark.

1851.

P. N. O'BANNON, President, St. Louisville.
W. S. WRIGHT, Vice President, Granville.
G. F. MOORE, Secretary, Newark.
H. S. SPRAGUE, Treasurer, Newark.

Report of the Treasurer of the Licking County Agricultural Society for 1851.

	Dr.	
Balance in Treasury, January 1st, 1851.....	\$200	47
Amount paid by members	263	50
Admission fees to Fair grounds, &c.....	385	55
From County	193	90
	<hr/>	<hr/>
	\$1,043	52
	Cr.	
Paid premiums and expenses.....	\$689	57
Premiums and orders to be paid.....	120	75
	<hr/>	<hr/>
		790 32
In Treasury for 1852	\$253	20
	<hr/>	<hr/>

H. S. SPRAGUE,

Treasurer Licking County Agricultural Society.

Dec. 29th, 1851.

Taxes from public shows \$66 50 to the State.

No escheated lands.

P. N. O'BANNON, P. L. O. A. S.

REPORT OF THE COMMITTEE ON FARMS.

To the President and Directors of the Licking County Agricultural Society :

The undersigned having been notified that they were appointed the *Committee on farms*—and that the following gentlemen have entered their farms for premiums, to wit : James Fleming, of Hanover ; Jacob Stoolfire, of Union ; John Reed, of Newton ; James Rankin, of Newark, and Thomas Evans, of Granville township—met in Newark, pursuant to a notice from the Secretary, on the 26th day of June, and proceeded to view said farms, in the order hereafter noticed.

Mr. Stoolfire's farm lies $1\frac{1}{2}$ miles south-west of Hebron—slopes beautifully to the south, and contains about 200 acres—140 of which are improved, and present a well cultivated appearance.

In the centre of this farm there is a graceful eminence, on which stands the mansion. The soil of the south half of this farm is black vegetable mould, and on this part of the farm there was originally some wet and marshy locations, which are now remedied by open and under drains. The average yield of corn from this farm is 75 bushels, and of wheat, from 16 to 18 bushels per acre. As Mr. Stoolfire's principal manner of farming is grazing, he is particular to have his meadows well set in grass. He sows timothy seed liberally, but is not a friend to clover. He argues that clover impoverishes more than it enriches the soil. It is well known in this county that Mr. Stoolfire deals in choice cattle and pays and receives

prices accordingly—but his principal stock is sheep, from which he receives a better return than from any other resource of his farming operations. Mr. Stoolfire says that his improved land pays him annually, clear and above all expense, at least \$5.00 per acre.

After dining, your committee proceeded to the farm of Mr. Evans, which lies in the north-west corner of Granville township, and contains 305 acres, 200 of which are improved. A part of this farm is hilly, and the soil in some sections on the hills, rather sterile; in other sections, when cultivated, has yielded fair crops of wheat. Near the centre of this farm, there is a valley about one-half mile in length, through which passes a small spring run; on either side of this run there was, originally, much wet ground, so that cattle could not with safety pass over it. Mr. Evans has made a dry and uniform soil nearly over all this portion of his farm, by under drains; 200 rods of these drains are completed, and the remaining wet portions are being completed. Mr. Evans located in these hills comparatively poor, but by dint of science, prudence and persevering industry, he has overcome the obstacles which have laid in his way, such as lands to clear, improve and pay for, and the result is, he has a good farm, comfortable buildings, and out of debt. The sales from his farm the past year have been about \$1000. Mr. Evans cultivates wheat, corn, oats and grass, and rears horses, cattle, sheep and swine for market.

Your committee having spent the night at Mr. Evans' proceeded to the farm of Mr. Reed, which lies on the west side of the North Fork of Licking, 6 miles from Newark, and contains 255 acres—180 of which are improved, and about 150 acres of which is first and second bottom land. Mr. Reed cultivates principally wheat and corn, of which he has 60 acres each, that show good cultivation. This is one of nature's best farms. Its location is pleasant. The Newark and Mt. Vernon road, and the Newark and Sandusky Railroad, cross this farm in the same line, and at nearly right angles. About 100 yards west, and nearly parallel with these roads, there is a handsome bluff, some 20 feet high, on which stand the mansion and barn, both of which are respectable and worthy of imitation.

From a spring on the west side of this farm, Mr. Reed has brought water to his barn-yard in pipes, and says that from this spring he can water all his fields. The farm appears to be well supplied with that very essential article, oak timber.

The farming tools for the farm are abundant, and of the improved kind. Mr. Reed has been in possession of this farm but for a short time—but your committee are led to believe that his intelligence and perseverance, will place the cultivation of this farm in the catalogue of *first rate*, at no distant day. He thinks his improved lands pay him annually, clear of all expenses, \$5.00 per acre.

Mr. Rankin's farm lies two miles north-east of Newark, and contains 256 acres; 180 of which are improved. This farm is rolling oak land, or rather hills and valleys—the valleys running north and south, sloping to the south. Near the base on the east side of the main hill, there is a beautiful spring, near which Mr. Rankin

has built a good brick house, which is furnished and kept in the very best style. A few rods north of the spring, Mr. Rankin has built a large and substantial barn, which has two floors, the barn being on the side hill; the team drives in on the upper floor. Mr. Rankin cultivates principally, wheat and grass—the soil on the hill land being well adapted to wheat, and the valleys to grass. He has 40 acres in meadow, and sows yearly 50 acres to wheat, which yields an annual average from 16 to 18 bushels per acre. The farm is clean and neatly cultivated, and is well supplied with oak timber—hence the fences are good and strong. After viewing the farm, your committee were treated to an excellent dinner, with very kind and familiar attentions, and the only regret was, that Mr. Rankin was not at home.

Mr. Fleming's farm lies about 7 miles east of Newark, on the Zanesville road, and contains 436 acres—300 of which is improved. The soil is clayey, or such as is peculiar to oak and hickory lands. Some portions of it, however, show a superficial coating of black loam; nearly all the improved land is slightly rolling and undulating.

Mr. Fleming has laid out his farm into 10 fields; these fields are all numbered, and entrance to each field is by a substantial gate, and at each gate, on one of the posts, is a painted board with the number of the field. No. 1 is in pasture, and south of the Zanesville road; the other fields lie north of the same road. He has a broad lane through the centre of his farm, by which he can drive his stock or his team, to any field he wishes, without trespassing upon another. The farm is well supplied with as handsome oak timber as ever grew from the earth. The fences are well and liberally built, and on straight lines—in short, this farm is laid out and kept in neat and first rate order. The house and barn are substantial frame buildings, which stand on the north side of the Zanesville road, the barn has convenient fixtures, and on three sides there are new and strong sheds. In one corner of the barn-yard there are scales conveniently arranged for weighing stock.

Your committee, upon consultation, are unanimous in awarding the first premium to Mr. James M. Fleming, for the best cultivated farm. A majority of your committee considers Mr. Rankin's farm entitled to the second premium, and therefore award to him the premium for the second best cultivated farm.

ELIZUR ABBOTT,
HENRY SMITH,
JOHN BRUMBACK,
J. M. FLEMING.

Mr. Fleming, by request, furnished your committee with a plan of his manner of farming, which is as follows:

My plan of farming is to divide into fifths and raise two crops from one plowing or breaking—plow in open spells through winter or March if possible. When the season comes for planting, dress well with a sharp harrow, lay off with a No. 1, Long's patent, about 3½ feet from east to west, and 4 feet north and south—half as

deep as the sod was broken—tand with a shovel plow till ready to lay by, then take the No. 1, run twice in a row, and back the middle, with the shovel. At the proper time cut the corn by the root, dress well with a sharp harrow across the furrows before sowing; harrow twice after sowing. I prefer the double working attachment harrow. Soon after I am done sowing, I sow timothy seed at the rate of one bushel to 7 or 8 acres, and the spring following, clover seed at the rate of one bushel to 10 or 11 acres, according to the adaptation of the land to the grass—thus create a new sod to protect the land and produce pasture during the interim, and at the end of the period, whether three or five years, to be in turn plowed under. A large portion of the lands of Licking county will bear dividing into thirds, if care be taken to keep it in grass, and properly distribute the manure. I raised last year, 50 bushels of corn per acre, per average, and 26 bushels of wheat per average, one acre yielding 36 bushels. I will not lengthen this article, to discuss the merits of this plan, but as far as I have practised it, I am well satisfied.

Yours truly,

J. M. FLEMING.

The awarding committee on sheep, in forming their decision, were not governed altogether by the fineness of the wool, but took into consideration compactness of fleece, together with length of staple and evenness of the exterior or finish. The display of sheep at the Licking County Fair, in point of numbers and quality, is very superior to the State Fair at Columbus. Among the sheep exhibited, of both bucks and ewes, there were some of very superior excellence, not only as to exquisite fineness, but every other excellence that constitute a first rate sheep. At this time we have the largest number of sheep of any county in this State. From the excellence of many sheep, we can build up flocks that in every point of view will be equal to any of the United States, and with the care that interest would dictate, equal to the celebrated flocks of Saxony.

NOAH P. ATKINSON,
JOHN GURNEY,
RUFUS WING.

OAT CROP.

To the Corresponding Secretary of the Ohio State Board :

SIR—I present my crop of Oats, the statement of which is on this paper, for the premium offered. It is all the oats raised on my farm this year, the produce being 291 bushels on $4\frac{4}{11}$ acres, or 63 bushels 3 pecks per acre. I might have picked one acre much better than the average, but not having a surveyor in time, and thinking it difficult to measure it accurate while in the shock, I did not do it. Not having a sealed half bushel, I weighed one bushel of the measure, and the weight was 35 pounds; the whole crop, by weight would be $318\frac{1}{2}$ bushels.

EDWARD PRICE.

Statement of Oat Crop above referred to. — Mode of Cultivation, Expenses, &c.

The previous crop was corn, manured with 20 loads barn-yard manure to the acre.

Soil, clayey, sloping gradually to the north-east; manured, 15 loads per acre, spread and plowed in; sowed $2\frac{1}{2}$ bushels to the acre, and harrowed in April 18th; harvested August 1st, and threshed and cleaned September 13th, 1851. The yield was 291 bushels, as measured from the machine; the measure was heaped; one bushel was weighed, and it weighed 35 pounds, and the persons assisting in getting it out, expressed their belief that from 10 to 20 bushels was left in the straw and chaff. I have not marketed the oats; they are worth, in Newark, 20 cents per bushel.

EXPENSES.

To 4 days plowing.....	\$6 00
To $11\frac{1}{2}$ bushels oats.....	2 25
To 67 loads manure.....	6 70
To $1\frac{1}{2}$ day's harrowing.....	2 00
To cutting, binding and shocking.....	6 87 $\frac{1}{2}$
To hauling and stacking.....	2 12 $\frac{1}{2}$
To threshing.....	9 00
To rent of land.....	6 75
Total.....	\$41 70
	Cr.
By 291 bushels of oats.....	\$58 20
By straw and chaff.....	9 00
Total.....	\$67 20
Deduct expenses.....	41 70
Net profit.....	\$25 50

SUPPLEMENTARY REPORT.

Our wheat crop this year, upon an average, is only tolerably good, perhaps about 15 bushels per acre. Last year the average, according to the Assessor's report, was 17 bushels per acre. The same reports show that 48,187 acres were cultivated in wheat last year, and the number of bushels of wheat produced, 849,116. The White Blue-stem is becoming a general favorite among the farmers of this county; it yields well per acre, and also makes an abundant yield of the best quality of flour per bushel.

A short time previous to harvest, a small insect made its appearance in many fields of wheat, which alarmed many of the farmers, but it disappeared without

doing much if any injury. Some called it the weevil, others said it was not, but gave it no name. It was located between the chaff and grain—was black or of a dark brown color.

Neither fly nor rust did any injury this year.

Our corn crop of this year is quite light, not an average of more than 30 bushels per acre; this partial failure is attributed to the drouth and the ravages of the grub, wire-worm and small ants.

Last year the number of acres in corn was 38,241½, and the number of bushels produced, 1,527,734, an average of about 40 bushels per acre.

As regards other crops, &c., the remarks made by H. C. Taylor last year, found on page 247 of the report of the State Board, will apply to this year.

Wool.—Nearly half a million pounds of wool was sold in the county during the past season.

No escheated lands in this county.

Sixty-six dollars and fifty cents is the amount to which the State Board of Agriculture is entitled out of permits for shows.

POTATO CULTIVATION.

To the Members of the Licking County Agricultural Society :

GENTLEMEN—I gave to you last year, as I supposed, the cause of the potato rot. This season has fully satisfied me that that my views in respect to that malady is correct. There is no potato rot, I believe, in the county. In all my inquiries throughout the county, I could hear of none. And why no rot this season? The query is very readily answered: Since July we have had a remarkably dry season; so much so, that there was no excess of moisture to generate a deleterious fermentation to the healthy production of the potato, and they are all sound, and will remain sound, if dry before they yet become affected 'by an excess of moisture.

That such is the fact, that the hot, sultry sun—or, in other words, the sultry atmosphere, during the latter part of summer, acting upon the soil where the excess of moisture cannot pass off in due time, either by evaporation or drainage, produces a chemical action between the solvent, nutritive particles of the earth, and a fetid fermentation takes place, which is deleterious to the health of the potato, can no longer be disputed.

In Patent Office Report of 1847: Appendix No. 5, is found an experiment of two successive years, with 17 different kinds of manure, which results in the fact, that those manures which cause and continue an excess of moisture, produce the rot in the potato.

Patent Office Report of 1848: Appendix No. 4.—After summing up the experiments since 1842, in the culture of the potato, comes to the conclusion, that the cultivation of the potato in a dry, warm, loose soil, avoiding fresh animal manure, and the digging or gathering of the same in dry weather, and housing dry, in dry, airy cellars, &c., deserves more attention than any other theory advanced.

We will now turn to the Agricultural Report of the State of Ohio for 1850 :

Brown County.—Early planting on rich, dry land, is generally found to be the best.

Clark county.—Very light, owing to drouth. No rot this season.

Cuyahoga county.—Not much rot or decay in potatoes, on dry soil, this season ; but on stiff, wet soil the rot was bad.

Erie county.—The only land which produces good, sound potatoes, are the dry, sandy soils, without much manure.—B. SUMMERS.

Fullon county.—Dry, sandy soils are preferred to prevent the rot.

Geauga county.—Our farmers plant on our forest soil, using no manure of any kind.

Guernsey county.—Rich upland, without fresh manure, seems the surest way to procure sound, healthy potatoes.

Holmes county.—Plant early, work well, and dig early and dry, is considered advisable.

Huron county.—Planting upon dry, sandy soil, and digging early, is found the best guard against disease.

Lawrence county.—Plant early, on good, dry land ; cultivate well ; dig in September. Plant near the surface, by all means.

Lorain county.—Sandy, gravelly soil is the best protection against disease, to which, add early planting.

Mahoning county.—Early planting, on high, fertile, dry soil, without manure, succeeds the best.

Marion county.—New ground—'sandy alluvial'—without manure, we think best for this crop ; dried a few hours in the sun when dug, and put in an out house, dry, cool and airy, we think a partial preventive of the rot.

Preble county.—The drouth caused a total failure in many cases, but the potatoes are very good in quality ; no rot this season.

Warren county.—Early planting is considered, generally, the best means of escaping the disease, and procuring a good crop. The richest, dryest and strongest grounds are generally selected for potatoes. Clayey uplands, well manured, produce quite as well as our black bottom lands, in Irish potatoes, and much better in sweet potatoes.

Wayne county.—Potatoes free from rot on dry, warm soils.

Wood county.—This year's crop good. Early planted potatoes are injured by the drouth. Sandy soil yields better than the clayey, and not so liable to the rot. Early digging, and a small mixture of lime when stored away, or buried, have been found the best means to prevent the rot."

Then, if such be the case, how shall we, when lands are not favorably situated, and during wet seasons, guard against this malady ?

Plant early, dig early, dig dry, and house dry, is the answer to such a query; and dig as soon as they are found to be ripe. Because the malady is never injurious until after midsummer.

But if the excess of moisture acted upon by the sultry atmosphere of our latter summers, be the cause of the potato rot, why have we not always been troubled with it?

Such a query is easily answered, and if the observations of experienced farmers and naturalists be accepted, the above query will not be made. I shall not dwell upon quotations to carry out so simple a fact as an answer to the above query, but merely state, that he who has raised for a succession of years, wheat, corn or oats, &c., on the same piece of ground, without manuring, knows that he can no longer succeed with a good crop on the same piece of ground, without restoring to that ground the principle that the successive crops have taken away. "Feed the cow, and she will feed you," is the old adage, and it is just as applicable now as it ever was. Restore to the earth that food that is wholesome and nourishing to the healthy production of the potato, and we shall raise just as good potatoes as in former years.

I do not mean that we must resort to the common method of manuring, nor to the alternate use of grounds; but I wish it to be understood, that by our extended system of cultivation, we have drawn from the earth a certain principle that is favorable to the potato, and we never can successfully raise them again until we discover what it is, and then restore it.

Then, says another, we must resort to new grounds. That, I own, will be a partial remedy, only; but through our extended system of cultivation, the forest soils have been forced to give up to the vast fields of cultivated soils, its portion of that nutritive principle, until it has in a manner become exhausted, and we shall nowhere find that principle, unless it be in the forests of the far West.

This may be looked upon as chimerical and wild, but I reason from the observations of experienced farmers and naturalists—if they be wild, then am I wild. Wild or tame, I stand prepared to defend the doctrine in correspondence to the laws of nature and philosophy.

What that beneficial principle is, remains for our scientific farmers and naturalists to discover. I believe it to be a proper portion of carbon, from the very fact, that almost always the first crop of potatoes raised upon a piece of new ground, has turned out a good one—owing, probably, to the amount of wood ashes and coal strewn over the ground in clearing it off. The same reason why they do better in sandy or gravelly soil.

Sweet potatoes will yield better in a clayey, limestone soil. And I believe any of our side-hill lands, with a southern aspect, will yield better in sweet potatoes than any of our creek bottom lands. Mr. S. A. Barker, in his report of Morgan county, to the State Board, says:

"Sweet potatoes are becoming an important item in the agricultural products of this county. They succeed as well, and frequently better, on our hills, in a lime-

stone clay soil, than on our loamy and sandy river bottoms. They are now cultivated by acres. Mr. Joseph Strall, in an adjoining township, has 1100 bushels stored for spring; all grown on a small hill farm."

Mr. E. Carpenter, in his report of Warren county, says:

"Clayey uplands, well manured, produce quite as well as our black bottom lands, in Irish potatoes, and much better in sweet potatoes."

Mr. Warthan, of Newton township, procured from me, last spring, 5,000 plants; and I am told that his yield of sweet potatoes is about 100 bushels to the acre. You all know what kind of land the eastern portion of Newton township is, where Mr. Warthan lives. And I see in Jersey township, better sweet potatoes than any other place, raised on the points of apparently dry, poor hills. The ground was made very loose and fine. This would seem to say that they can only be successfully raised upon such land. Without understanding their nature, such lands are the best. But our rich bottom lands will yield full as well as the uplands, when we know how to cultivate them there. We know that our strawberry beds will not pay for the labor bestowed upon them, unless artifice be resorted to. So it is, I believe, with the sweet potatoe, upon rich bottom lands. I have, the past season, tried an experiment, and it appears to have done well, but the dryness of the season has prevented me from testing it fully. I will make a further trial another season; and then, if as successful as this, I shall be satisfied with the experiment, and will give it to the public at our next annual meeting of the society.

While on the subject of Irish potatoes, I forgot noticing a new method of cultivating them, which I met with in Union township, on the farm of Mr. Asa Park. The piece of land would probably measure one-fourth of an acre. I believe he told me it had been used as part of the barn yard. This he cleaned off, and then upon the hard, unplowed ground, he strewed his potatoes in drills, and then with a thick coat of straw covered the whole piece of ground. The potatoes came up through the straw, and grew as thrifty and as strong as if the ground had been regularly plowed and tilled. The yield was just as good as I have seen any where in the county. In opening the straw around the vines, the potatoes appeared to lie there as clean as eggs in a hen's nest—not in the earth, but on it, and in the straw.

Mr. Siglar, of Franklin township, told me, that since he quit raising in straw, he has not good potatoes, either in quantity or quality.

My potatoes, planted in a sandy soil, have done well; as well as could be expected, for the season. The variety called the Cow-horns, have yielded the best—at the rate of 210 bushels to the acre. But they are a potato that requires a very loose, sandy soil, in order to grow large, and are the earliest variety that can be raised. The round flat reds, called the Red Neshanock, yield very well, and are also an excellent potato. The Long Reds, or La Plattes, are an excellent potato to yield, for size and quantity, but are only fit for stock.

DAVID WYRICK.

Wheat Crop Statement.

HANOVER TOWNSHIP.

The acre and crop of wheat on which I was awarded premiums, was a sod, plowed in the spring and tended in corn. The corn cut up in the fall; the ground not plowed but dressed well with a harrow before sowing and harrowed twice after.

Whole cost of seed and labor on 24 acres of wheat.....	\$113 00
Twenty-four acres at $26\frac{1}{2}$ bushels per acre, 634 bushels, at 60 cents per bushel.....	\$380 40
Deduct cost.....	113 00
Net profit.....	\$267 40

J. M. FLEMING.

Wheat Crop Statement.

GRANVILLE TOWNSHIP.

My crop of wheat was raised on wheat and oat stubble ground, which had been broken up the year before. The land had been in pasture some three years. Soil, clay loam, subsoil, yellow clay, and plowed once, about 8 inches deep. Expense of plowing, harrowing and sowing, \$1 50 per acre; number of acres, eight; yield, $23\frac{1}{2}$ bushels to the acre.

LUCIUS CASE.

Oat Crop Statement.

NEWARK TOWNSHIP.

My oats were sowed the last of March; the ground plowed once; sowed $2\frac{1}{2}$ bushels to the acre, and harrowed in. The yield, $73\frac{1}{2}$ bushels per acre.

Cost of putting in, harvesting threshing and seed.....	\$6 62
Market price, 20 cents, $73\frac{1}{2}$ bushels.....	14 70
Deduct cost.....	6 62
Net profit.....	\$8 08

Potato Crop Statement.

My potatoes were raised on ground that was in wheat last year; planted the 15th of April in rows, $2\frac{1}{2}$ feet apart; cut the potatoes so as to have three or four eyes in a hill. As soon as they were up, so as to see the rows, I went through with a shovel plow, once in a row, and gave them a slight dressing with the hoe. When they were up six or eight inches, I went the other way with the plow, and gave them another hoeing; and the remainder of the work was done with the plow. The yield was $55\frac{1}{2}$ bushels on one-fourth of an acre.

Expense of Culture.

Three bushels of seed	\$1 87
Plowing and hoeing	1 25
Digging and marketing	2 25
Total cost	\$5 37
	CR.
Market price 50 cents, 55½ bushels	\$25 75
Deduct cost	5 37
Net profit	\$22 38
	L. ROOT.

LOGAN COUNTY.

Report of the Logan County Agricultural Society.

Our first county Fair was held on the 29th and 30th days of October, 1851. On the first day of the Fair, the rain poured down in torrents, but notwithstanding the inclemency of the weather, the citizens of Logan, men, women and children, thronged the streets of Bellefontaine. At 11 o'clock, A. M., an address was delivered by Hon. William Lawrence, of which we shall only say, we deem it worthy of a place in the annual report of the State Board, and therefore we enclose a printed copy.

The weather in the fore part of the second day was also quite unfavorable; and we confess that we felt not a little discouraged. Who would turn out on such a morning as this? but we soon discovered our mistake. It was our first Fair—the honor of Logan county was at stake; and our farmers and mechanics soon brought the blush to our cheeks that we had not before learned the fact, that when *they* have an object in view worthy of *their* enterprise, they fix their eyes upon it and not on the clouds.

This day's exhibition revealed to every discerning citizen another very important benefit, resulting directly from agricultural fairs—one not often if ever mentioned. They exhibit, at a glance, the true condition of the county, in every branch of industry and enterprise; and we venture the remark, that our county stands to-day, in an agricultural point of view, at least, twenty-five per cent. above the place it held in the judgment of its own citizens previous to the fair.

We designed giving in this report the exact amount of our exports, but as the day of the annual meeting of the State Board of Agriculture and Agricultural Convention, is on the 3d of December, and not the 10th as we had been informed,

we are not prepared to do more than give a rough estimate of this year's products.

PRINCIPAL CROPS.—Wheat, Corn, Oats, Hay, and Clover Seed.

1. **WHEAT.**—The number of acres sown has increased but little since our last report—we think not in proportion to the number of acres brought into cultivation. Hitherto wheat and flour have constituted about two-thirds of the whole amount of our exports. Our soil is well adapted to the growth of every species of grain, and our locality, too, being about half way between Lake Erie and the Ohio river, would seem to give us an enviable position in relation to both markets. When the lake is open, our transportations would naturally take that direction for the best market; and in the winter season, when the lake is closed, for a like reason, the opposite course. Strange as it may seem, this advantage is wrested from us by what, as strikes our judgment, is the very unjust and unwise policy of the Mad River and Lake Erie Railroad Company. And to this we would call the attention of the State Board. We think we have a right to do so from the fact that one of the most important objects to be attained by the organization of the State Agricultural Society, is to protect the farming interest from the unjust and unequal charges made for the transportation of the products of the soil; and, so far as its influence can be felt, to secure to all and every county in Ohio the full advantage of natural rights, and by so doing cause to be developed the whole resources of the State. The facts, as we understand them, are the following:

Logan county raises for exportation not less than five hundred thousand bushels of wheat per annum. The Mad River and Lake Erie Railroad Company charges, from Bellefontaine to Sandusky, $11\frac{7}{16}$ cents per mile on every one hundred bushels of wheat. From Dayton to Sandusky, the same company charges $7\frac{1}{16}$ cents per mile on every one hundred bushels, making a difference in favor of Montgomery county of $4\frac{1}{16}$ cents per mile on every hundred bushels of wheat, or \$4 24 cents more on each hundred bushels transported from Bellefontaine to Sandusky, pro rata, than from Dayton to Sandusky, making against Logan county the enormous amount of twenty-one thousand two hundred dollars per year, on one item only of our products. Part of this amount of wheat is manufactured into flour at home, and so shipped to market; but such are the company's rates of tariff, that it is believed this fact will make little or no difference in the amount against us.

According to this estimate, Logan county is over charged on her whole products transported, not less, as we believe, than \$30,000 per annum.

The distance from Bellefontaine to Sandusky is 102 miles; from Dayton to Sandusky, 158 miles.

The same company charges $17\frac{1}{16}$ cents per mile on the same amount of wheat (100 bushels,) from Bellefontaine to Springfield. The Little Miami Railroad Company charges $6\frac{5}{16}$ cents per hundred bushels, per mile, from Springfield to Cincinnati; making the charges of the former $10\frac{9}{16}$ cents per mile on the same amount (100 bushels,) more than the latter. Suppose the 500,000 bushels of

wheat shipped to Cincinnati instead of Sandusky, we would have to pay sixteen thousand nine hundred and fifty dollars more than we would have to pay were the rates of tariff the same per mile from Springfield to Bellefontaine that they are from Springfield to Cincinnati.

It is easy to see the reason why we are charged 5⁴¹/₁₀₀ cents per mile more, when we ship to Cincinnati, than when we ship to Sandusky, on the same road. The distance, as above stated, from Bellefontaine to Sandusky, 102 miles, while from Bellefontaine to Springfield, the southern terminus of the road, is only 32 miles. From the facts here stated, it will be seen that Springfield and Dayton, the one 32 miles and the other 56 miles south of us, have greatly the advantage of us in the northern market, whilst our products are almost entirely excluded, by a prohibitory tariff, from the southern market.

Farmers a few miles south of West Liberty, one of our most flourishing towns, are hauling their wheat to Springfield, and selling it 5 and 6 cents per bushel higher than can be paid for it in West Liberty, and there the same grain is reshipped to go past us to the northern market.

In consequence of this policy, which must in the end prove suicidal to the company's interest in this county—the cultivation of grain, and especially of wheat, is receiving less attention than it would otherwise merit. Our farmers are wisely turning their attention to the raising of stock.

We estimate the crop of wheat raised this year at 800,000 bushels; average per acre, 20 bushels. The average price during the year, reckoning from the 1st of November, 1850, to November, 1851, is 55 cents per bushel. The white varieties are worth from 5 to 8 cents on the bushel more than the red, and the Mediterranean is esteemed of least value.

2. CORN.—Amount of corn supposed to be about the same as last year, 574,000 bushels; average yield 40 bushels per acre; price from 28 to 30 cents per bushel. This as well as the last year's crop falls far short of our usual yield. The corn suffered very much from drouth in the months of July, August and September.]

3. OATS.—Crop above the average yield. We set it down from 35 to 40 bushels per acre; and the aggregate amount 190,000 bushels. Price per bushel during the year, 18 cents.

4. HAY.—We have a fair crop of hay, which we estimate at about 14,800 tons; from 1½ to 3 tons per acre. Price per ton, delivered in Bellefontaine or West Liberty, from \$5 to \$6.

5. RYE AND BARLEY.—The value of these crops is not duly appreciated by our farmers, and consequently but little raised.

7. ROOT CROPS.—Irish potatoes in abundance, and free of the rot, this year. The average yield is about 250 bushels per acre. Aggregate amount, 30,000 bushels. Price, 25 cents per bushel.

Sweet potatoes are raised for exportation. We have no means of ascertaining the amount. Average price 80 cents per bushel.

8. FRUIT.—None worth naming this year.

9. **SEEDS.**—Clover seed more extensively cultivated this year than it usually is in our county. It is believed we have about 5000 bushels for exportation; and that the average yield per acre has been from 2 to 3½ bushels. Price, \$4 per bushel.

10. **DAIRY PRODUCTS.**—Butter has become a valuable article of export in Logan. Average price yearly increasing. This year the price has varied from 8 to 20 cents per pound. Without any means of knowing the amount made, we think we may safely set down the amount exported at 400,000 pounds.

11. **SHEEP AND WOOL.**—Our stock of sheep has greatly increased during the last year. Several valuable importations have been made; and by this means the quality of wool greatly improved. We are mistaken if Logan will not so rank among the first wool-growing counties in the State, and this, too, mainly for a reason given in our present article on wheat.

Our number, at rough guess, is 52,000; amount of wool at last spring's clipping, 150,000 pounds; average price, 40 cents per lb.

12. **PORK.**—The aggregate number of hogs in the county was estimated, last year, at 23,000, and of these we supposed one-half fattened for home consumption and foreign markets. The number is considerably less this year. We will put down the number at 18,000. Price, \$4, nett weight, per 100 lbs.

13. **CATTLE.**—Of all descriptions, we believe there are not less than 16,000 head. Much attention is being paid to the introduction of best breeds. This is evident from the superior stock exhibited at our late fair. The Durham short horns are beginning to push our old fashioned scrubs out of our best pastures.

14. **HORSES AND MULES.**—Stock improving and increasing. Number not known. Prices, as in all other sections of the State, remunerating.

15. **IMPLEMENTS.**—Improvements are being made in all farming utensils. This is especially true in the selection of plows.

16. **MILLS.**—Several valuable mills have been erected since our last report. We are ignorant of the number. Our county is well supplied. The steam planing mill, lately built in Bellefontaine, is one of the very best, if not the best in the State.

LUTHER SMITH, *President.*

The following persons were duly elected officers of the Society.

LUTHER SMITH, President.
JOHN HOGG, Vice President.
B. S. BROWN, Treasurer.
N. R. USHER, Rec. Secretary.

BELLEFONTAINE, OHIO, NOV., 1851.

TO LUTHER SMITH, *Pres't Logan Co. Ag. Soc.* :

DEAR SIR :—The following is an abstract of the condition of the treasury of the society at the end of the year 1851, that is at Nov. 1 :

Amount received from members.....	\$204 50
Interest on money loaned.....	2 72
Received from county treasury.....	96 00
	<hr/>
	\$303 22

CONTRA.

By amount paid for incidental expenses.....	\$34 59
By amount paid for premiums.....	132 25
	<hr/>
	\$166 84
Leaving balance in treasury of.....	<hr/>
	\$156 38

N. B.—There is outstanding orders, not yet presented for payment, for premiums, of \$9 50.

Respectfully submitted,

B. S. BROWN, *Treasurer.*

ADDRESS OF WILLIAM LAWRENCE,

Delivered before the Logan County Agricultural Society, October 20th, 1851.

Mr. President, and Gentlemen of the Logan County Agricultural Society :

The occasion which calls us together is one of no ordinary interest. We are here to advance the cause of agriculture, and to witness the achievements of husbandry, as exhibited in the first agricultural fair ever held in the county of Logan. One year ago this Society was organized, to impress the spirit of progress upon all that pertains to the cultivation of the soil ; to lend new vigor to industry in its most important branches, and to claim for labor its appropriate consideration and reward. We are now, for the first time, called to witness, in part, the results of this organization, in the rich and varied productions here to be exhibited. Of these it is not my purpose to speak—they bear witness for themselves, and give evidence that in the abundant resources of Logan, there is everything to stimulate a laudable spirit of emulation, and to gratify it with rewards worthy of the loftiest ambition. These are the trophies of the cultivation of the arts of peace—they come to us hallowed with the beneficence of Deity—they make the heart glad, and cause us to rejoice.

The inquiry may naturally arise, why is all this? To what good? What end is to be attained? I answer by asserting two propositions, affirmed by the truth of history—verified by the experience of the present and the past:

1st. Agriculture is the most ancient employment of man—it is the most useful, and I had almost said the most honorable, and with us, as indeed with civilized nations generally, it is the most extensive and important branch of industry.

2d. Notwithstanding the importance of agriculture, it has received less aid from government—from the press—from science—from organized action of every kind, than almost any subject which has been deemed worthy of public consideration and favor.

If these propositions are true, then I ask, is it not high time that something should be done for agriculture?—that the public mind should be aroused, and that the same law of progress which pervades the world in every other department, should be made to guide and govern this.

With the creation of man, it was ordained that “in the sweat of thy face shalt thou eat bread,” and this great law has followed him for six thousand years “without variableness or shadow of turning.” The first man born into the world was a “tiller of the ground,” and Abel sacrificed “the firstlings of his flock,” and when nearly all the inhabitants of the earth had been destroyed with the deluge, Noah “began to be a husbandman and planted a vineyard.” Of agriculture, a writer in the “*Encyclopedia Americana*” says: “This art is the basis of all other arts, and in all countries coeval with the dawn of civilization. Without agriculture mankind would be savages, thinly scattered through interminable forest, with no other habitations than caverns, hollow trees, or huts more rude and inconvenient than the most ordinary hovel or cattle shed of the modern cultivator. It is the most useful as well as the most ancient of the arts, and requires the greatest number of operators. It employs seven-eighths of the entire population of almost every civilized community. Agriculture is not only indispensable to national prosperity, but is eminently conducive to the welfare of those who are engaged in it. It gives health to the body, energy to the mind, (*mens sana in corpore sano*)—is favorable to virtuous and temperate habits, and to knowledge and purity of moral character, which are the pillars of good government, and the true spirit of national independence.”

In the State of Ohio, in 1840, as appears by the census returns of that year, 272,570 persons were employed in agricultural pursuits, while those employed in all other branches of industry were only 85,259. In that year the number of persons in Logan county engaged in agriculture, was 3,433, while those employed in all other branches, were only 643, not including, of course, females and children. The late census returns will show an increased population, with similar results. The same returns will show that the capital invested in agriculture and the pursuits of agricultural industry, by far exceeds the investments in, and products of all other

branches of industry, and so it always has been, in all ages of mankind, with all civilized people. But I need not here trace the history of the past, and point to the period when

"In ancient times the sacred plow employ'd
The Kings and awful fathers of mankind,"

For we are more engaged with the present and the mighty future, than with the past; but even a glance at the past and the present will demonstrate what must continue to exist in future; that agriculture is the most important, the most extensive branch of industry pursued by civilized man; that it employs more men, more money, more time, and more labor, than all other pursuits; that it is the foundation of civil society, and the basis of all other arts; that with its destiny, for weal or for woe, is blended the well-being of mankind.

With this view of the immensity, as well as of the importance of agriculture, we are enabled to form some conception of what it deserves from the government, from the public, and from individual influence.

When the true statesman is asked what should be the end of all legitimate government, the response is, "the greatest good to the greatest number," consistent with the rights of all. When the man of science "trims the midnight taper," and devotes his life to the cause of learning, what should be the temporal object of his mental toil, and research, and investigation? To promote the happiness of man, and to improve his mental and moral condition.

When the press abounds in every county almost in our land, diffusing in every direction its radiant light, it should be controlled for the same grand object.

Yet, while agriculture, and those engaged in its pursuits, present the most comprehensive theatre for the operations of the statesman; the man of science, and the press, it is a lamentable fact, not to be disguised, that farmers as a class, and agriculture as a business, have never been the chief objects of beneficial legislation, nor for them has made its chief research, nor the press devoted its mightiest energies. I speak more particularly of years gone by, but even now, the interests of agriculture are far less cared for, than their merits demand.

More than three centuries and a half ago, John Guttenberg, of Mentz, invented the art of printing—"the art preservative of all arts"—which has done more for the well-being of man, than any invention since the creation of the world. Newspapers were published almost coeval with the settlement of the western world. But with all the importance of agriculture, the first newspaper published in America, devoted exclusively to its interests—the "American Farmer"—was not issued until the 2d of April, 1819. Not a single generation has passed since agriculture had a periodical to advocate its claims, under the editorial management of John S. Skinner. Now we have advanced so far that the periodical press, very generally, devotes a liberal space to the dissemination of agricultural knowledge, and yet agriculture—as an art—as a science—at the end of six thousand years, from the period when it commenced, is yet almost in its infancy, so far as perfect knowledge and applica-

tion of its true principles are concerned. And all this, or much of it, arises from the fact that agriculture has been neglected by the State, by the nation, and by the people. As the representative of this society, on a former occasion, I said what I yet maintain, that during the brief but interesting period of our history, agriculture has received less aid from legislation and organized action of any kind, than any other branch of industry. Politics and morals have their organizations and societies—national, State, county and township. The political world is controlled, or at least acts through its national and inferior conventions. The moral world acts and is impelled to action by the same machinery. Commerce and manufactures have their tariff laws. The inventive genius of the Yankee, and the intellect of the author, have their patent-right, and copy-right laws. But where are laws for agriculture? They are no where. This great first art, this great first science, whose element is the “earth and the fullness thereof,” has no humble college, with professors devoted to its teachings, and hence a recent legal publication proposes to exclude farmers from the Jury box, because “their talk is of bullocks,” and not of Blackstone and Coke. If we would, as we should, elevate the science and business of agriculture—advance the standard of intelligence amongst those engaged in it, then we must have our conventions, national as well as State and county, devoted to that object.

With these considerations then, I submit that it is apparent that agriculture is a comprehensive and important subject, which has not been duly fostered and encouraged by the government and people at large.

And here the inquiry presents itself, what ought to be done, and what can be done to advance the interests of agriculture? By what means may results, however desirable, be accomplished?

In law there is a theory that “there is no wrong without a remedy”—perhaps it may be said with more truth of agriculture as it exists, that its evils and defects are susceptible of an adequate and complete remedy. What then should be the object of this organization, and of similar ones scattered throughout the length and breadth of the country? For whatever ought to be done can be done. In the brief space allotted to this address it would be idle to attempt the solution of so comprehensive an inquiry, but prominent among the laudable objects to be attained I trust I may venture to say are these:

First. To disseminate knowledge on all subjects connected with agriculture and mechanical industry.

Second. To devise means of increasing the productive powers of the soils, and of diminishing the amount of labor necessary to secure its products; and to devise means to secure land from sterility arising from cultivation; and

Lastly, to secure the rewards of labor, and the interests of those engaged in productive industry.

All of these, Mr. President, in a greater or less degree may be careful subjects of consideration and action by this society—and in aid of all these it is our right

and our duty to invoke the assistance of the citizen and of the government. Let me, then, as briefly as I can, present some considerations upon each of these topics.

I suppose it will not be denied at this day, that knowledge upon all subjects is desirable. I do not disparage the claims of our farmers to a high degree of intelligence, when I say that agriculture, both as an art and as a science, is not duly understood, for with the very little attention it has received and is receiving from the "powers that be," and the people, it could not be otherwise. Six months of the next session of Congress will be spent — I had almost said idly spent — more with reference to who shall be elected President of the United States in 1852, than for the purpose of adding to the happiness and resources of the people whose laws he is to execute. A thousand conventions will be held in the United States within a year, whose motto might well be, "all for politics; nothing for agriculture." I would not be understood that the people should not study and understand politics; it is their duty, but, at the same time, agriculture, too, should have its thousand conventions, its speeches, lectures, essays, its laws and its aid from the government. This is the first convention agriculture has had in Logan, and if any one supposes its object is simply to amuse, and to make a show, then he is sadly mistaken. Here are the choicest products of our soil and industry — their exhibition excites a laudable spirit of emulation, and diffuses information as to the means by which they are brought forth. If in the quiet seclusion of a farm, a new method of cultivation is discovered, here its knowledge is imparted to all, which otherwise would be lost to the world, for with truth it may be said :

"Full many a gem of purest ray serene,
The dark unfathomed caves of ocean bare ;
Full many a flower is born to blush unseen,
And waste its fragrance on the desert air."

In this way all that is acquired by practical experience becomes generally known. Is this not a solid recompense for all the time devoted to agriculture by this association ?

But this is not all. The spirit of inquiry is excited and men study and learn that knowledge which pertains to the great business of agriculture, and promote the true glory and strength of the State ; for after all we may truly exclaim with the poet :

"What constitutes a State ?
Not high raised battlement or labored mound,
Thick wall or moated gate ;
Not cities proud with spires and turrets crowned ;
Not bays and broad armed ports
Where, laughing at the storm, rich navies ride ;
Not starred and spangled courts,
Where low-brow'd baseness wafts perfumes to pride ;
No! men, high-minded men ;
These constitute the State ! "

Does any one doubt that a knowledge of the true principles of agriculture is essential to the existence, the prosperity, and the glory of the nation, then I point to Northern Africa, to Asia Minor, to Mexico, to bear witness to the truth of my position. "Some of the spots," says Davy, "now desert sands in Northern Africa and Asia Minor were anciently fertile; Sicily was the granary of Italy, and the quantity of corn carried off from it by the Romans is probably the chief cause of the sterility."

In Asia Minor at this day the same rude instrument is employed as a plow, which was used two thousand years ago, and as a consequence we send missionaries there to enlighten the semi-barbarians, who inhabit its worn-out soil.

Go wherever you will, over this footstool of the Creator, you find that National greatness, prosperity, and happiness are only to be found where agriculture is understood and flourishes.

Go to Mexico — our sister republic of this continent — her people have scarcely learned the first elements of agriculture — their rude plow has undergone no change since Cortez first landed on her shores, and, as a consequence, the national energies are paralysed — her people are ignorant and imbecile — there is not a railroad in the land, nor one solitary farm wagon in all that republic. To make them prosperous and happy, they want intelligence upon agriculture, which, when practically applied, will afford the means of gaining intelligence — the power of self-government to the people — and independence and power to the nation.

If we would continue to increase in prosperity and power, then let us disseminate knowledge upon subjects connected with agriculture, and this can be done by this society, not only in the mode already suggested, but in still other ways. There should be some means devised of applying to the test of practical experience, whatever, in the principles, or implements of agriculture, may be discovered to be new and useful; and how can this be done more effectually than through the agency of this society?

Let me illustrate my meaning. It is impossible for every farmer to examine and test every new implement of husbandry — he has neither time nor money to do so. A hundred may attempt it and the experiment will at last only prove in many cases that they have been successfully imposed on.

But here the imposition is guarded against. A committee of intelligent men examine every implement and to the deserving is awarded a premium and a diploma. The experiment is tried — the machine is tested for all, and the test is applied, not by learned theorizers at the Patent Office — not by interested agents who speculate out of the delusions of honest men — but by intelligent, practical farmers whose opinions are worthy of credit from their experience, and whose interest is the sure guaranty of their fidelity — for after all there is no guaranty so universally potent as that of interest — so true is it that "where a man's treasure is, there will his heart be also."

The Premium and Diploma of this society should give greater credit to any new invention in agriculture — to any new implement — than letters patent. Hence-

forth let it be understood that no farmer shall be imposed on by patent implements and machinery, and that the passport to public favor shall hereafter be the Premium and Diploma of the Agricultural Societies of the land. In the selection of fruits, of seeds, of plants, of stock, here too, is the surest guardian of the farmer's interest. Henceforth, then, receive with great caution, any of those not having the sanction of an agricultural society, and solid benefits will result to every man.

But I have said that the dissemination of knowledge should be one of the chief objects of this association. Shall that be done only in the modes I have suggested? I answer, no. It is not sufficient to call the public mind to the subject—it is not sufficient to excite the spirit of just emulation—it is not sufficient merely to profit by the experience of others—it is not sufficient to protect the farming community against imposition and point out the best implements for their use through the instrumentality of this society—it is not sufficient to create a taste for reading agricultural newspapers and in that way invoke the aid of the press, but in some way, either under the patronage of the State, or of the State Board of Agriculture, or by private enterprise, in some of our institutions of learning, should be established a Department for instruction in Practical and Scientific Agriculture. This it is our duty to demand—the prosperity of the State, the happiness of the people, the interests of agriculture demand it. When this shall be done, and agriculture shall be regarded as a business to be studied, then may the farmer justly feel, that

“ For him the Spring

Distils her dews, and from the silken gem
Its lucid leaves unfold—for him the hand
Of Autumn tinges every fertile branch
With blooming gold and blushes like the morn.
Each passing hour sheds tribute from her wings;
And still new beauties meet his lonely walk
And loves unfelt attract him. Not a breeze
Flies o'er the meadow, not a cloud imbibes
The setting sun's effulgence, not a strain
From all the tenants of the warbling shade
Ascends but whence his bosom can partake
Fresh pleasure unreprieved.’

Does any one inquire could such a department be sustained? I answer—law, medicine, theology, engineering, all have their institutions of learning, and yet they employ but a small portion of the mighty and increasing mass of our people.

And cannot Agriculture sustain an Institution of learning devoted to its teachings? While all the world beside is progressing ever onward, is there no progress here? When the public mind shall be fully alive to this subject, I entertain no doubt that a department could be sustained in every institution of learning in the land, devoted to instruction in useful knowledge pertaining to the interests of Agriculture. Still more—if this subject were viewed in its proper light, a reasonable share of such instruction would form a necessary part of the education of every young man designed to embark in the business of Agriculture.

In Europe there are at this day three hundred and fifty-two such schools of various grades—in Ohio there is not one. The reason is apparent—public sentiment does not demand it. In no country is public opinion so potent as in the United States—it moulds our laws, it frames our institutions, it gives tone to the morals and shapes the character of our public men. Let us aim to create a public opinion which shall demand such institutions and they will come.

In the mean time let me suggest, Mr. President, and gentlemen of the Agricultural Society, that once at least in every year, there should be read before this Society by its members, carefully prepared and well-written articles upon the various subjects which might promote the objects of this Association. These would afford a fund of valuable information which no other source could supply. In this way we may bring to our aid the experience of age, the results of inquiry and research, new modes of cultivation, the value of different varieties of stock, fruits, grains, implements—in fact all that can be arrived at by

“ The power of thought, the energy
Of unsupported mind, whose steady will
No force can daunt, nor tangled path divert
From its high, onward purpose.”

I trust, then, Mr. President, that I have demonstrated that it is within the province and the power of this Association to be of high practical utility in the dissemination of useful knowledge.

But what shall be the object of that knowledge, and of what shall it consist?

The answer to this inquiry involves the consideration, to some extent, of what I have classed as second among the objects to be attained by Agricultural Societies—to prevent sterility or barrenness of the soil arising from cultivation; to increase its productive powers, and diminish the labor of securing its fruits. These are among the grand objects of all our inquiry—of all our pursuits.

But, says one, is it possible these fertile fields, luxuriant vales, those verdant prairies which yearly teem with golden harvests and abundant crops, can ever become a sterile waste? I answer, yes. The want of proper information and practice in Agriculture has transformed Nature's Paradise into a desert waste. I have already pointed to the desolate remains of once fertile regions on other shores, and I would gladly persuade myself, that in our own favored land no signs of the desolation had ever marked our soil. But the alarming truth is upon us, that even in some States of this Union, once fertile fields, have fallen into dilapidation and decay, while the once busy haunts of men, have been converted into an abode for wild beasts.

Go even to a neighboring State, and of portions of that I find a recent writer says—“The land is naturally good and easily tilled. * * * * *

* * * The land around sells from one to three and four dollars per acre. *

* * * * * You would imagine that in a country where houses are

going to ruin, where fields once arable and fertile are abandoned to the weeds and the wild tenants of the woods coming back to re-inhabit them, you would see every man at work, struggling night and day to resist the progress of dilapidation as

“A brave man struggling with the storms of fate,”

but instead of that, it is a rare thing to see a white man—laboring systematically at the plow—through the whole country.”

Go to Jamestown—almost the birth-place of civilization on this Continent, and where and what is it? It needs no Volney to say of it, as he once said of cities whose glory has long since departed—“And now a mournful skeleton is all that exists of this powerful city. Nought remains of its vast domination, [but a doubtful and empty remembrance, to the tumultuous throng which crowded under these porticoes has succeeded the solitude of death. The silence of the tomb is substituted for the bustle of public places. The opulence of a commercial city is changed into hideous poverty. The palaces of the rich have become a den of wild beasts, flocks fold on the area of the temple, and unclean reptiles inhabit the sanctuary of the Gods. Ah! how has so much glory been eclipsed? How have so many laborers been annihilated? Thus perish the works of men, and thus do Nations and Empires disappear.”

Say what you will of the causes that operate to produce all this, and still it is because Agriculture is not properly understood and applied. Why it is so, we need not now inquire.

Such too will be the fate of our cherished, adored, and beloved Logan, unless that fate shall be averted by a proper knowledge and application of Agriculture. Continued cultivation without proper management will wear out the soil. In portions of Western New York, the wheat lands have been so exhausted that from producing twenty bushels to the acre, twenty years ago, they now produce only eleven. It is one of the ordinances of Nature, that “unless you feed your land it will not feed you,” and this is one of the subjects which it is the duty of this Society to impress upon the public mind, with the remedy for so startling and appalling a danger. But we should seek not only to avert the desolating blight of sterility and barrenness—we should seek to increase the productive powers of the soil.

In the Patent Office Report for 1850, a writer says—“It is almost impossible to over-estimate the importance of understanding all the elements and circumstances which affect the natural productiveness of the earth.” To show what American soil and climate have done and are capable of doing, the writer states, “that in the year 1850, there were nine competitors for the premium corn crop in the State of Kentucky, each of whom cultivated ten acres. The average crop was one hundred and twenty-one bushels and twenty-four quarts per acre—the highest was one hundred and eighty-nine bushels and one quart per acre!” A knowledge of the means by which this result can be brought about is a solid recompense for all

the time we can devote to Agricultural Societies. The man who teaches how an acre of ground can be made to add one bushel to a crop without additional labor, adds more to the wealth of the world than all the glittering mines of California. An increase in the wheat crop of Ohio of half a bushel to the acre, in an ordinary season, is worth more than a million of dollars. If by any means an addition of four per cent. can be made to the products of Logan county by improvements in Agriculture, the result would be found about as follows:

	Crops of 1850.	Increase 4 per cent.	Value.
Wheat.....	978,000 bu.	39,120	\$23,472 00
Corn.....	574,000 "	22,960	5,740 00
Oats.....	95,000 "	3,800	886 00
Hay.....	7,400 tons	296	1,776 00
Potatoes.....	26,000 bu.	1,040	260 00
Clover Seed.....	1,085 "	43	172 00
Wool.....	120,000 lb.	4,810	1,440 00
Total.....			\$33,696 00

An increase of 4 per cent. or one additional bushel in every twenty-five in our chief products, to say nothing of cattle, horses, hogs, &c., would exceed annually thirty-three thousand dollars, and yet, Mr. President, I hesitate not to say, when Agriculture shall be properly understood, our products can be increased 20, or even 40 per cent., without additional labor. These are the objects of our inquiry—these are the results we seek to accomplish—and in our vocabulary there is no such word as fail.

"It is the duty of the Government," says Thaer, "to place some educated men in a position to employ their time and talents in investigating the secrets of Nature for the advancement of Agriculture and the general good. Agricultural Societies, which are instituted for the advancement of science, should especially engage in the preparation of such experiments and divide the execution of them among the several members, 'and this plan,' we are told by the Editor of the Farmer's Library, 'is adopted by the Royal Agricultural Society of England.' 'It only requires,' says Petzholdt, 'the hearty co-operation of the scientific chemist and the practical Agriculturist to draw from it results not only tending to enrich individuals, to support and augment the wealth of States, but to confer an universal and permanent benefit upon all mankind.'"

It will be seen from what I have endeavored to explain, that this Society aims, or should aim to disseminate knowledge—carried into practical operation of two kinds.

First. The knowledge and practice which every good farmer acquires at home, and

Secondly. The knowledge which is derived from books, or book-farming.

Let me, then, Mr. President, say a few words as to each. Who does not know that we are sadly deficient in carrying into effect even that system of farming which our home experience teaches us is best? Let Logan county be cultivated as our best farmers till the soil, and more than fifty thousand dollars will be yearly added to the products of Agricultural industry. So far as this society can accomplish that result by exciting a spirit of emulation, by arousing the public mind, by diffusing practical knowledge, by persuasion and argument, by precept and example, by line upon line, it will be done.

And what shall be urged as the results of home experience—what shall we say should guide the husbandman in the management of his farm? To attempt a reply would require a volume, not a speech, but it may be possible even now to suggest a very few of the rules by which every farm should be managed, and some of the means by which our country may be converted almost into a garden.

First, then, let me suggest that labor is the *primum mobile*—the chief element of success in all enterprises. Without it mankind ceases to exist. It is one of the great laws of Nature, that labor is essential to the health, existence and happiness of man. Without industry there can be no success—no substantial prosperity.

“Plow deep while sluggards sleep,
And you shall have corn to sell and keep.”

is an old adage that deserves to be engraved in letters of gold upon every farmhouse in the land. I would by no means inculcate the idea that any class of men should be doomed to unceasing toil—on the contrary, industry should be well applied at proper seasons, and in a proper manner, as the surest means of securing the fruits of the soil, with the least possible degree of physical exertion. By industry, then, I mean that a sufficient amount of labor should be applied in proper season to do whatever ought to be done.

Secondly. Secure the best implements of husbandry—the best seeds, fruits, stock, roots—in fine the best implements to raise products from which to make up the produce of your soil.

In the address of the Rev. John Pratt to the Agricultural Society of Licking County, he says upon this subject—“Take illustrations from the ax, the plow, the scythe. With that old ax, both rusty and obtuse, you do up a cord per day and lose an ounce of blood. With an ax worthy of the name you gain an ounce of blood and put up a cord and a half. So you pay one dollar and fifty cents for the privilege of wasting six ounces of blood. Your team dragging painfully along your old rusty plow with half a nose, does only half execution on your land, while it calls for an extra half bushel of oats each day. And I know a man who for summers in succession used a snath which used him up every day by ten o'clock.

Furnished afterwards as a mower ought to be, he could swing the scythe all day with ease. That miserable old snath cost its more miserable owner from first to last, not less than the price of twenty good ones, to say nothing about pleurisy and rheumatism. Diminished weight in your purses, and pleurisy and rheumatism in yourselves, and in your teams, are the penalty of using poor tools."

I might illustrate the advantages of good seeds, stock, &c., but time will not permit me to do so in detail. Every farmer knows that it is easier to raise good healthy animals than sickly dwarfs, and besides it is more profitable. One bushel of good seed for the same labor will yield ten or twenty per cent. more than a bushel of poor seed. The one opens up the road to wealth, the other to poverty, toil, and the clutches of the constable and sheriff, with levies and executions.

As a third rule I would suggest,

Cultivate your farms well—do all that ought to be done in good order and in good season. This comprehends much, and embodies the doctrine of the adage—that "whatever is worth doing, is worth doing well." A half plowed field will be productive of weeds, a well plowed one of crops. The well plowed field requires less cultivation, produces better and adds more to the fertility of the soil and the pocket. Barren fields are generally the result of bad cultivation. I know that much of the knowledge requisite to carry out this rule belongs to book-farming, and cannot be obtained by our home experience. I am now urging the importance of those rules founded in our own experience, and the necessity of their observance. Whatever increases the productive powers of the soil, adds what is equivalent to acres to every man's farm. The invention of the sub-soil plow is worth the annexation of five States to the American Union, if properly used, and yet in all of Logan county there is not one such plow. Let me say to every man who wants more acres of land—buy a sub-soil plow. It would be vain in an address like this to attempt a statement of what pertains to good cultivation, for time would not permit. I can scarcely glance at the outlines. Good cultivation requires that crops should be adapted to the soil—that a proper rotation of crops should be observed with alternate rotation and pasturage, that the soil should be plowed in proper season, and in proper manner, and so on. But I need not enlarge—my design is not so much to define what good cultivation is, as to urge its observance, founded on experience. Thaer, in his *Principles of Agriculture*, says: "The ancients founded their Agriculture on the lessons of experience, and they raised it to such perfection as to be able frequently to make the same land yield two crops in one year. The Romans were well aware of the beneficial results of careful tillage, and exposure to the influence of the atmosphere on land that was destined to bear only wheat, barley and oats, or other grain of this kind; but they also knew

*"Mutatis quoque requiescent fractibus arva,
Nec nulla in serae, inaratæ gratia terræ."*

Your fields would produce equally as well if you changed the crops, and then you would not have to pay the rent of land, which bore no crops, and hence arose questions as to "which are the crops that can be made to succeed one another with the greatest advantage, and which are those that have the tendency of preparing the soil for the one which is to follow"—very important questions, worthy of experiment and consideration at this day. We are told that in the capitula of Charlemagne de villis et curtis Imperatoris' the order of the succession of crops was positively dedicated to his officers and stewarts.

As a fourth rule worthy of consideration, let me say: Improve your farms in every way, to add to their productiveness and convenience.

This, too, will be found somewhat comprehensive, since it embraces clearing, building, fencing, keeping in good order, manuring, watering, making of meadows, planting of choice orchards, trees, and the thousand other improvements which add to the convenience, comfort, productive powers, and value of a farm. All this is a work of time, industry and capital—but it is a work which pays, and not only so, it is the highest evidence of individual and national prosperity. Aided only by the lights of home experience, much can be done in the way of improving farms, but aided by the light of Art and Science, this world can almost be converted into a Paradise. When time shall permit, the subject just alluded to, will, I trust, claim the consideration and attention of this Society. For the present, I can only allude to them with scarcely a passing comment. Let me however urge the importance of manuring your farms. I have already endeavored to show that without this they will become a desert waste. Petzholdt in his *Agricultural Chemistry* says, "neither fallow nor rotation of crops can impart to the soil that degree of fertility necessary for the successful growth of cultivated plants. Continual harvests have in the course of time gradually withdrawn from the soil so great an amount of its mineral constituents, that a want of them is almost every where very sensibly felt, so that it has become the principal object in Agriculture to replace artificially, those substances which have been taken away from the soil in the crops. Every thing that can enrich the soil, should be collected, preserved and applied to it. The manure of the stable and barn-yard—lime, ashes, bones, straw—every thing should be given to the soil, and increased crops will more than richly repay your pains. There is no labor so profitably directed, as in applying manure to the soil. A single pound of lime dust, says Leibig, contains nearly as much phosphoric acid as two bushels of wheat. Then, to increase your wheat crop, burn every every bone and scatter the dust on your wheat fields.

I might suggest other rules of vast utility, but for the present I forbear.

But why the necessity of urging what I have denominated Book Farming, or that knowledge derived from books which pertains to Agriculture?

The answer to this inquiry embodies one of the most startling announcements ever made, and as I prefer on such momentous questions, to quote the authority of others, I answer in the language of a writer in the last Patent Office Report. He

says: "We have long contended and religiously believe that the cultivators of American soil perform more unnecessary work every year to obtain their crops than the aggregate labor of all classes combined. This prodigious loss of National industry and capital can never be prevented until the laws of Nature that govern the fruitfulness of the earth, and the rewards of farm labor are studied, understood and obeyed. The unwillingness of the people, of State Legislature, and Congress to foster the study of good husbandry, is the greatest marvel of the age." If this be true, as I believe it is, the want of a proper knowledge of Book Farming costs the farmers of Logan county more unnecessary work each year than the aggregate labor of all other classes. How many days and months of hard toil might be avoided to devote to the improvement of our minds by adding to our knowledge of Agriculture!

But you will inquire how this is? How will book farming relieve us of a portion of our toil, and add to the rewards of our labor? To answer this is to reiterate the volumes that have been written on agriculture and its concomitant sciences. Go, peruse them as they unfold the volume of Nature and reveal God's immutable and eternal laws, there is the answer.

But you inquire how? One of the first things to be understood, to farm aright is to understand the nature and value of soils. Again I appeal to authority. A writer in the Patent Office Report of 1851 says: "The proportions of sand, clay, and mould in a soil vary indefinitely. Not only is this true, but the nature, composition and value of different kinds of sand, clay, and mould vary in an equal degree. A very slight change in a soil is adequate to double the reward of every day's labor expended in growing crops thereon. The science of agriculture teaches how to make that change which will double the rewards of every day's labor. This requires a knowledge of Agronomy, or the science of the soils.

Again, as the various products of the soil require different elements to bring them to perfection, the science of Agriculture teaches not only what soils are adapted to particular crops, but what varieties of manure are adapted to the crops and the soils—what elements of fertility should be applied to the various products of the earth, to bring an abundant and fruitful return—that was a fortunate day which gave the world Leibig, whose profound and scientific researches taught mankind to know "what each plant is made of, and what it feeds upon in the course of its developments, and also how the food it requires can be procured, valuable as that discovery undoubtedly is, it forms no part of what I have called home agriculture—it belongs to chemistry—to agricultural science—"that science now guides the agriculturist in his investigations, as astronomy and the compass guide the navigator in his course." In this way scientific agriculture diminishes the labor necessary to secure a given amount of agricultural productions. Not only this—this science investigates the properties of the air, water—soils—the constituents of plants, and how to promote their formation, modes of cultivation, fallow, fruits, rotation, and succession of crops—vegetable, animal and mineral manures—the implements

of labor—the varieties of grains, grass, roots, plants—the kind of soil adapted to crops—the manures adapted to various soils and crops—the varieties and value of food for stock—systems of cultivation—clearing of forests—labor as applied to agriculture—hedges, fences, enclosures, ditching, irrigation, farm buildings, management of farms, chemistry, botany, and a vast variety of kindred subjects. All nature is open to its investigations, its votary “looks through nature up to nature’s God,” and with expanding soul becomes a wiser and better man—of this science it may be truly said

“It warms in the sun—refreshes in the breeze,
Glow in the stars and blossoms in the trees;
Lives through all life—extends through all extent,
Spreads undivided—and operates unspent.”

Such is the ennobling science of agriculture—the study of the laws of the Deity, which, while it enhances the knowledge and happiness of mankind here, prepares him for a higher and holier sphere hereafter.

But this society not only seeks to be useful in the modes I have indicated, but it is, and ever should be, a cardinal object to secure the rewards of labor and the interest of those engaged in productive industry.

By this I do not mean that any new political organizations should be formed, or new tests required, but I do mean that it is the duty of the government by all legitimate means and wise legislation, to secure the rewards of labor and the interests of those engaged in productive industry, and so far as this can be accomplished through enlightened public opinion, this society will have a tendency to produce that result. Until public opinion and individual enterprise shall demand and sustain the necessary means of promoting agricultural science, we have a right to insist that the government, State and national, shall do all within the scope of their power to foster and encourage these great and growing interests.

The first great object of every tiller of the soil should be to secure a home, for we are assured from high authority that “the Heaven of Heavens is the Lord’s, but the earth hath he given to his creatures”—for them this earth was designed—to secure to every man a home by all means consistent with public good, should be the cherished object of our government. Let this be done, and industry is promoted—the surest guaranty is offered that labor shall be rewarded—“the magic of property,” says Arthur Young, “transforms sand into gold. Give a man the secure possession of a bleak rock and he will turn it into a garden. Give him a nine year’s lease of a garden and he will turn it into a desert.”

Fortunately for the interests of mankind, the great West is furnishing homes for those who are destitute, and ere long will doubtless do so more advantageously than now—by this I do not mean that the honest and industrious tenant of a lease should not receive all encouragement—he should do so, but at the same time he should be encouraged to be the owner of the soil. There is no state of society so

favorable to the development of industry—in which labor meets so full a reward as where the secure possession of the soil gives every man a home, which should be encouraged by all proper means. Does any doubt this—look at Ireland, her population this day is less than 30 years ago. Her soil is fertile, and her natural resources abundant. A recent writer says of Ireland: “A full third of its cultivated land has never been reclaimed from a state of nature; and the cultivation of the remaining two-thirds is generally of the most miserable kind.”

The cause of all this is found in the fact that the occupants of the soil are not its owners.

“Send the Irishman,” says Mr. Kay, “to Australia, to the States, or to any English Colony, where he can make himself, by industry, a proprietor of land, and where he is not shackled by middle-ages legislation, and he becomes immediately the most energetic and conservative of colonists. He acquires faster, effects more in a day, and is more untiring in his perseverance than any one else.” They are, indeed, as has been truly said, successful every where but in Ireland.

Let not our government, then, crush the rewards of industry by legislation favorable to land monopoly, but rather encourage all to become the industrious occupants of happy and thrifty homes.

Nor is this all—with all good governments it should be a fundamental principle to protect labor. This is the foundation of all wealth, prosperity and greatness. I would not undertake to prescribe what system of laws is most favorable to the protection of labor, but I assert what it will coincide in, that the laws of commerce, trade, and revenue should be formed with reference to their effect on labor, and the rewards of the great agricultural staples of the country. Whatever system of political economy secures these, secures the true and permanent interests of the country. While capital should not be rendered insecure, and should receive just favor from the government, still capital can generally protect itself, while labor always has been less protected by law, and more at the mercy of capital than has been consistent with public good.

Let us then, in such manner as our judgment may dictate, claim for labor the high, proud and honorable standing it deserves—let us claim its just reward, and not only by giving it a profitable employment and rendering it as productive as experience and science can make it, but by claiming that it first of all demands and should receive the fostering care and protection of the government. Let us inculcate the truth that indolence and idleness are at war with God's economy, of nature, and the happiness of man, and therefore are synonymous with disgrace, while labor is high, honorable, holy. Let us insist that society at large shall confer no distinctions, except those granted as a reward of merit. Let us acknowledge no nobility of birth, or wealth, or station, but reverence only the nobility of merit, and a sacred halo will encircle the morals and politics of the land. Let science and truth enlighten our path, and the good of mankind beckon us onward, and blessings will rise up to greet us as the abundant rewards of our labor.

LORAIN COUNTY.

Report of the Secretary of the Lorain Agricultural Society.

I see by the act for the encouragement of Agriculture, passed Feb. 27th, 1846, section 3d, that "It shall be the duty of each county or district society to publish annually a list of the awards, and an abstract of the Treasurer's account, in a newspaper of the district." The law in these respects has been complied with.

I have enclosed the report of the committee on hedges, which shows the improvement in that respect which is being made in this county. There were no premiums awarded on hedges by the Society.

I have also enclosed a copy of the printed list of premiums offered and awarded by the Society, [omitted here,] together with the abstract of the Treasurer's report.

Also, the statements of competitors for premiums on crops.

The prospects of our Society, on the whole, are encouraging, as the amount paid into the treasury the past year is more than for either of the two preceding years. There is also an evident improvement in the various kinds of stock. Our horses are being improved by the Morgan horse of Vermont—our cattle by the Durham, Devonshire and Herefords—and our sheep by the Paulars, and French sheep, together with the Leicesters. Fine specimens of the above horses, cattle and sheep, were shown at our late County Fair, and there is no doubt but these improvements are the results of our county fairs.

The number of members on our books is about two hundred and ninety, and the number of paying members this year is a little over one hundred, leaving about one hundred and eighty delinquent members. Many of these have not paid since the first year, and others are delinquent one, two and three years each. The number of new members this year is forty-six. This is owing to the Fair being held at the south part of the county, and caused a delinquency at the north part of the county. This will be obviated another year, by holding the Fair at a more central place.

The Society held its annual Fair at Wellington, on the 1st and 2d days of October. The first day was devoted to the examination of horses, cattle, sheep, swine, &c., and attending to the plowing match. The second day was devoted to the examination of dairy products, vegetables, fruits, flowers, domestic manufactures, &c., &c.

The Society then listened to some remarks by Mr. Elliott, of Cleveland, after which the reports of the committees were made, and the officers elected for the ensuing year.

The principal kinds of Agricultural productions of this county, are, wheat, corn, oats, butter, cheese, and wool. The aggregate amount of the above items, I am

unable to state. There are a great many horses and cattle raised, and sold, mainly to drovers. Wheat has yielded this year about 18 bushels per acre, on an average. The average yield of corn is about 30 bushels per acre—oats, about 40 bushels per acre. Potatoes, a very light crop, although there were some fine pieces grown. One piece entered for premium, yielded 70 bushels on $\frac{1}{4}$ of an acre.

The price of wheat has varied from 55 to 75 cts. per bushel—corn 35 to 40 cts. per bushel—oats 18 to 25 cts. per bushel—butter from 9 to 16 cents per pound—cheese, $4\frac{1}{2}$ to 5, and wool, 35 to 42 cents per pound.

The principal places of marketing our products are Wellington, Okegria, and Elyria, and wheat is sold at Birmingham, Erie county.

All of which is respectfully submitted.

E. MATCHAM, *Sec. Lorain Co. Ag. Soc.*

A statement of the time the Lorain County Agricultural Society was organized, together with a list of the officers up to the present time, with their post office address :

The Lorain County Agricultural Society was organized April 29th, 1848.

First year—officers elected :

JOSEPH SWIFT, President, of Henrietta.
D. B. KINNEY, V. President, of Oberlin.
ARTEMAS BEEBE, Treasurer, of Elyria.
A. H. REDDINGTON, Secretary, Amherst.

Second year—officers elected :

JOSEPH SWIFT, President, of Henrietta.
D. B. KINNEY, V. President, of Oberlin.
JOHN H. FAXON, Treasurer, of Elyria.
A. H. REDDINGTON, Secretary, of Amherst.

Third year—officers elected :—The President, Vice President, and Secretary, re-elected.

Fourth year—officers elected :

JOSEPH SWIFT, President, of Henrietta.
D. B. KINNEY, V. President, of Oberlin.
J. H. FAXON, Treasurer, of Elyria.
A. H. REDDINGTON, Secretary, of Amherst.

Fifth year—officers elected :

D. B. KINNEY, President, of Oberlin.
N. B. GATES, V. President, of Elyria.
WM. PATTERSON, Treasurer, of Carlisle.
A. H. REDDINGTON, Secretary, of Amherst.

Sixth year—officers elected :

D. B. KINNEY, President, of Oberlin.
N. B. GATES, V. President, of Elyria.
A. H. REDDINGTON, Treas. and Sec., of Amherst.

Seventh year—officers elected for ensuing year :

B. C. PERKINS, President, of Rochester.
N. B. GATES, V. President, of Elyria.
E. MATCHAM, Treas. and Sec., Pittsfield.

E. MATCHAM, *Sec. Lorain Co. Ag. Soc.*

Pittsfield, Nov. 14, 1851.

Report of the Treasurer of Lorain County Agricultural Society, 1851.

Amount received of members.....	\$111 00
Amount received of County Treasurer.....	111 00
	<hr/>
	\$222 00
Amount paid for premiums awarded, 1851.....	\$168 35
Amount paid A. H. Reddington for bill of printing.....	5 00
Amount paid G. G. Washburn for printing Treasurer's Report for 1851.....	1 00
Amount paid B. C. Perkins, expenses as delegate to State Board, at Columbus.....	10 00
	<hr/>
	184 35
Balance in Treasury.....	<hr/>
	<u>\$37 65</u>

E. MATCHAM,
Treasurer of Lorain County Agricultural Soc.

AUDITOR'S OFFICE,

ELYRIA, November 24, 1851.

DEAR SIR :—Yours is received. In answer, there is no escheated property in this county, that I know of.

The amount due the State for show licences, is \$46 07 5.

Respectfully,

GEORGE CLIFTON, *Auditor.*

WHEAT CROP.

Wheat crop of Harris R. Shelden, of Pittsfield. The ground was sward, plowed over in the month of June.

Cost of plowing.....	\$1 50
In the fore part of August the same was harrowed, at a cost of.....	75
Previous to the harrowing, there were ten loads of manure put on the same, cost.....	1 50
Plowed into beds of six yards wide, cost.....	1 00
Sowed with $1\frac{1}{2}$ bushels of wheat, cost.....	25
Then harrowed the same way of plowing, until well covered.....	1 00
Whole cost of cultivation.....	<u>\$7 00</u>

Sowed about the 10th of September, 1850.

The above acre of wheat was measured by George Fremire and myself, with a cord, and also harvested by us. The threshing was done by Crandle and West. The measuring was done by John Willton, L. B. Fremire, and myself. It measured 31 bushels, and weighs 64 pounds per bushel, which, by weight, is 33 bushels and four pounds.

HARRIS R. SHELDEN.

Corn crop of Harris R. Shelden, 159½ bushels per acre.

The land was sward ground on the river bottom, turned over in April, cost.....	\$1 50
Harrowed over twice.....	2 00
Marked both ways, four feet apart.....	50
Planted about the 8th of May, three and four kernels in a hill.....	1 00
Plowed out with a shovel plow four times—twice each way — and hoed twice; cost of plowing and hoeing.....	4 00
The whole cost of cultivation is.....	<u>\$9 00</u>

The above acre of corn was measured by George H. Fremire and Lawrence B. Fremire, with a cord. Three shocks were husked and weighed, and found to contain 326 lbs. of corn in the ear. Average weight $108\frac{1}{2}$ lbs. per shock. There were 79 shocks on the acre. We also weighed four bushels; average weight 54 lbs.; making 159 bushels and 18 lbs. to the acre. The whole corn was raised on the farm of H. R. Shelden, Pittsfield township, Lorain county, O.

L. B. FREMIRE,
G. H. REMIREF.

Carrot crop — 640 bushels per acre.

PITTSFIELD, September 30, 1851.

We, the undersigned, measured $\frac{1}{4}$ acre of carrots, raised by Joseph Worcester, and harvested one rod square of ground, an average of the $\frac{1}{4}$ acre. There were

four bushels on one rod of ground, which makes 160 bushels on $\frac{1}{4}$ of an acre, weighing 5 lbs. 12 oz. to the bushel; making 640 bushels to the acre, at a cost of \$17 00.

MARTIN W. DICKENSON,
ABEL F. WARD.

CORN CROP.

One acre of corn raised on the farm of Daniel Galey, Pittsfield township, Lorain county, Ohio — expense of plowing	\$1 25
Fitting, planting and hoeing	3 00
Cutting and putting in shock	50
Whole expense of cultivation	<u>\$4 75</u>

Planted about the 25th of May, 1851. Hoed once and plowed both ways. The above corn was raised on the farm of Homer Whitcomb, Pittsfield township, by Daniel Ely.

We, the undersigned, measured the above ground with a pole, ten rods by sixteen — forty three shocks to the acre. Husked two shocks — averaged five bushels per shock in the ear. Measured in half bushel. Weight of one bushel, 54 lbs. The two shocks measured were an average on the acre. Whole yield on one acre, 215 bushels.

HOMER WHITCOMB,
WARREN B. SANDERS.

Edward Rogers' Corn crop — 153 bushels per acre.

We, the undersigned, was present and helped to measure the ground and weigh one acre of corn raised by Edward Rogers the present season. We hereby certify that he had 153 bushels of corn on one acre of ground. The corn weighed 52 lbs. to the bushel of ears. The above estimate was made by weighing one bushel of ears, which weighed 52 lbs. The corn was raised in Pittsfield township, Lorain county, O. Signed this 29th day of September, A. D. 1851.

G. H. FREMIRE,
RICHARD ROGERS.

Hall's Potato crop.

Lorain county, Ohio, ss.

P. W. Hall being duly sworn, says that he has raised a crop of 70 bushels of potatoes on one-fourth acre of land, the past season, and that he was assisted in harvesting and measuring said crop, by Truman Demming, and that the statement annexed, subscribed by the deponent, as to the manner of cultivation, expenses, &c., is in all respects true, to the best of his knowledge and belief.

P. W. HALL.

Also, on ten rods of land, or nearly that, I have raised the past season, 15½ bushels of potatoes, on one side of the half acre specified above.

The potatoes were planted in drills, one foot apart and 3 feet and 4 inches between the rows. Planted 1st of May.

P. W. HALL.

Expense of plowing $\frac{1}{4}$ acre of green sward.....	\$ 50
Harrowing.....	25
Marking out and planting.....	1 00
Three bushels potatoes, 50 cents per bushel, (seed.).....	1 50
Cultivating and hoeing first time.....	1 00
Manuring and cultivating before hoeing second time.....	1 00
Plowing and hoeing second time.....	1 00
Harvesting.....	2 00
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	<hr/>
	<hr/>
	38 25

P. W. HALL.

MAHONING COUNTY.

General Remarks.

Our society continues to prosper. Many new members have been added this year, and the farmers generally seem to feel strong interest in our success. The report of our last fair, published in the newspapers, will give a view more in detail of our doings for the past year, and our present position; and we think we may safely say, our prospects have never been more favorable. The influence of our society is felt throughout our county, and even in neighboring counties, both in this State and Pennsylvania. It is visible in improved stock of all kinds, the improved appearance of farms and farm buildings, in improved methods of farming, and we may say in improvements in almost every respect. Deep plowing and sub-soiling, is now practiced to a considerable extent, and the experience thus far has been with very beneficial results, and improved implements are being more extensively used.

The amount received into our county treasury for shows, to which the Board is entitled, is sixty dollars.

We inclose you the annual addresses, six in number, delivered since the organization of our society. We have thus far relied upon our own members for the addresses, which has generally been upon some practical subject connected with the cultivation of the soil. They contain much valuable information, and we notice that extracts from them have been copied extensively into agricultural and other papers.

The distance from our county at which the State Fairs have been held hitherto, has prevented a large exhibition of the stock or productions of our county; but at the State Fair, the next fall, at Cleveland, we intend that Mahoning, in the wealth and excellence of the productions of her soil and manufactures, shall be fairly represented, and shall compete in generous rivalry with our sister counties for superiority.

ASA BALDWIN, *President*.

JOHN M. EDWARDS, *Secretary*.

CANFIELD, November, 1851.

Officers of the Mahoning County Agricultural Society, from its organisation.

The society was organized by the adoption of a Constitution and the election of officers, on April 7, 1847. The following gentlemen have served as officers of the society:

Presidents — EREN NEWTON, of Canfield, 1847, 1848.
GEORGE POW, of Greenford, 1849, 1850.
ASA BALDWIN, of Boardman, 1851.

Vice Presidents — JACOB COOK, Greenford, 1847.
GEORGE POW, Greenford, 1848.
ASA BALDWIN, Boardman, 1849, 1850.
DAVID HAYNES, of Poland, 1851.

Secretaries — SILAS C. CLARK, now of Canfield, 1847, '48 and '49.
JOHN M. EDWARDS, of Canfield, 1850, 1851.

Treasurers — WILLIAM LITTLE, of Poland, 1847, '48, '49, '50, 51.

WILLIAM LITTLE, *Treasurer*,

In account with Mahoning Agricultural society:

	Dr.
1850, Nov. 21, To balance on hand at last annual settlement.....	\$184 10
1851, Oct. Amount received from members.....	179 00
Amount received from County Treasury	118 67
	<hr/>
	\$481 77

	Cr.
1850, Dec. By amount of sundry bills, approved by the Board	\$18 62
Paid for 27 copies Ohio Cultivator.....	18 67
Paid for 13 copies A. Cultivator	9 00
Paid Church's bill printing	40 00
Paid premiums, 1850.....	35 00
1851, Nov. Paid Mason for printing, &c.....	20 00
Paid sundry bills approved	16 81
Paid premiums, 1851	209 75
Paid appropriation for delegate to Columbus,	15 00
	<hr/>
	382 85

Balance in the treasury, November 28, 1851.....

\$98 92

There has been appropriated for premiums not yet called for.....	\$80 00
For Agricultural papers.....	21 00
For bills due by the society, about.....	60 00
Total	<u>\$161 00</u>

WM. LITTLE, *Treasurer*.

POLAND, November 28, 1851.

OFFICERS ELECTED FOR 1852.

President — ASA BALDWIN, Boardman.
Vice Pres. — DAVID HAYNES, Boardman.
Treasurer — WM. LITTLE, Poland.
Secretary — SILAS C. CLARK, Canfield.

MARION COUNTY.

Report of Marion County Agricultural Society, Nov. 24th 1851.

This Society was organized Nov. 30th, 1850, and elected

E. HARDY, President, post office address, Marion.
 NEWTON MESSENGER, Vice President, post office address, Big Island.
 S. S. BENNETT, Secretary, do do Marion.
 SMITH FRAME, Treasurer, do do Big Island.

All of whom still hold their offices, no other election having yet been held.
 The first annual Fair was held at Marion, on the 21st and 22d days of October.

MARION, Dec. 1st, 1851.

DEAR SIR: At the annual election held this day, by the members of the Marion County Agricultural Society, they elected

J. S. COPELAND, President, post office address, Marion.
 ERENEZER PETERS, Vice President, post office address, Marion.
 E. HARDY, Treasurer, do do do
 NATHAN PETERS, Secretary, do do do

DANIEL S. DRAKE,	} Managers,	post office address, Waldo.
WILLIAM TAYLOR,		do do Salt Rock.
SAMUEL IREY,		do do Claridon.
THOMAS HOOPER,		do do Marion.
WILLIAM BRITTON,		do do Big Island.

Very respectfully your ob't serv't,

S. S. BENNETT, *Sec. Marion Co. Ag. Soc.*

W. W. MATHER, *Coresp. Sec. O. S. Board of Ag.*

The following is a statement of the Treasurer's account, as exhibited by him, and published in the newspapers of this place :

Received for membership.....	\$176 00
From County Treasury.....	62 50
Amount donated by members to whom premiums were awarded.....	16 00
	<hr/>
	\$194 50

DISBURSED.

Premiums on horses.....	\$27 00
“ on cattle.....	45 00
“ on sheep.....	20 00
“ on swine.....	6 00
“ on miscellaneous.....	14 75
Contingent expenses.....	4 52
	<hr/>
	\$117 27
	<hr/>
Balance in the Treasury.....	\$77 30
	<hr/>

There has been paid in the county treasury, for exhibitions or shows, during the past season, \$20 00.

There has been no improvement in any one particular branch of agriculture, in this county, during the past season, but a slow, gradual and general improvement is perceptible. Our agricultural fair was well attended, and the show was *good*; in cattle, horses, and sheep, *very good*. The arrangements and premium lists were not as full and complete as they should have been, but the knowledge now gained, will enable the Society to make many improvements for the next fair. About 40 head of horses, over 100 head of cattle, and a large number of very fine sheep, together with the enthusiasm and good feeling exhibited by our citizens in attendance, gave good evidence of what Marion county can now, and will hereafter do. We feel confident much good will result from a continuance of these yearly exhibitions.

Very respectfully your ob't servant,

E. HARDY, *President*.

A. S. BENNETT, *Secretary*.

MEDINA COUNTY.

BY HERMAN CANFIELD.

PRINCIPAL CROPS.—Grass, wheat, corn, and oats.

WHEAT.—The average yield throughout the county varies much with the different years. In 1845, owing to a severe frost in May, the crop was so much injured that the average yield did not probably exceed six bushels to the acre. In 1846,

the preceding winter and spring having been very favorable, the average yield came up in the neighborhood of 27 bushels to the acre, and perhaps more. The past season has also been favorable, and the crop unusually good. Average yield for this year about the same as last mentioned. The usual varieties cultivated are the White-flint, Blue-stem, Soules, Garden, and Mediterranean. The last named variety is not held in much reputę by our farmers. The Soules is said to yield the largest amount of superfine flour.

CORN.—The corn crop this season has been very light, owing to the excessive drouth, which prevailed during the months of July and August. The usual average is about 45 bushels to the acre, but this year it will not exceed 25. The larger part of the corn crop is consumed in the county, and but little is exported for sale. The usual price for the present year has been 42 cents. Corn planted at the earliest period the season will admit of, usually affords the largest yield.

OATS.—Average yield this season 40 bushels to the acre. Price, 25 to 31½ cents per bushel. The side oats, so called, afford the largest yield.

GRASS AND HAY.—Usual average 1½ tons to the acre. The drouth did not commence sufficiently early to injure the meadows, and the crop this season has been full an average one. Price of hay, usually, five dollars per ton.

Much attention is paid to grazing in this county, and from it is derived the principal source of agricultural prosperity.

RYE, BARLEY, AND FLAXSEED, are raised to some extent, but are not considered as staples. Flax is very rarely cultivated for the fibre. The usual yield of seed is 15 to 18 bushels to the acre.

ROOT CROPS.—Potatoes were formerly cultivated to a considerable extent, for the purpose of feeding to swine, but since the prevalence of the rot it has become difficult to procure enough for table use. Last spring potatoes were imported into this county from Michigan, and were sold for 75 cents per bushel. Price this season 50 cents. There has been but little complaint of the potato rot this season, but the crop was much injured by the drouth. No other root crops are grown to any extent, except for culinary purposes.

FRUIT.—There are several large nurseries in the county, which are yearly sending out supplies of choice fruit trees and in a few years, if not already, we shall be able to compete successfully with neighboring counties of older growth. In fruit seasons considerable quantities of dried apples and peaches are sent to foreign markets. There is a general scarcity of apples this season. Peaches were more abundant, but much injured by the curculio.

SEEDS.—Clover seed is raised to some extent in the south and south-eastern part of the county.

OTHER CROPS.—Broom Corn is cultivated to a very limited extent. An occasional field of the tobacco may be seen, but the lovers of this *delicious* weed generally prefer an *imported* article to *domestic* growth. Millet is occasionally, but rarely cultivated; it is supposed, however, that it might be made a profitable crop.

DAIRY PRODUCTS.—Large quantities of butter and cheese are annually manufactured in the county, and exported. In the north part of the county many of the farmers carry their products to Cleveland to market, and in the eastern part to Akron.

SHEEP AND WOOL.—There are many fine flocks of sheep in the county, and great variety of breed. There has been a good deal of pains taken to improve the quality of the wool. We can safely say that the wool grown in Medina county is as highly esteemed in eastern markets as the wool of any other county in the State. In some instances too much attention has been paid to obtain an extremely fine fibre, to the neglect of other essential qualities, and in those instances it has happened, most generally, that flocks have deteriorated in size and constitution. This error, however, is working its own remedy, and wool-growers are now endeavoring to secure healthy, hardy sheep, and such as will annually afford the greatest profit.

Mr. N. Pierce imported into the county, some years ago, a portion of the celebrated Grove flock, and has done much to advance the wool-growing interest in this neighborhood.

PORK.—Great improvement has been made within the past few years in breeding swine. *Working* and *racing* hogs have given place for sleek Berkshires and portly Woburns and Byfields. It is now but seldom that you see a farmer wasting his time and corn in the vain attempt to promote a growth of fat upon the *slab sides* and *poverty* shaped specimens of the early times, which were once too abundant.

There is but comparatively little packing done in the county for foreign market, the hogs being usually purchased on foot and driven to Cleveland to be slaughtered, or to eastern market.

BEEF.—Large numbers of fat cattle are annually driven from this county, a portion of which are slaughtered at Cleveland, and the remainder taken to eastern market. It is impossible to get at the exact number, but we presume the whole number of beef cattle annually slaughtered or sold for foreign market, will amount to about 5,500. Much attention has been paid to the improvement of stock, and particularly to the introduction of the Durham breed, and the display of this favorite stock at our annual fairs, is probably exceeded by but few, if any counties in the State. Some specimens of beef cattle, exhibited by Mr. James Gŭchrist, of Brunswick, at our last fair, resembled young *Mastadons*, rather than *bona fide* cattle.

HORSES AND MULES.—We are unable to report any particular improvement under this head. The horses most usually raised, are calculated more for carriage horses than for heavy draft. Number of horses in county 6,171. Owing to the perversity of their nature, their mixed parentage, and their uncouth appearance, or to some other cause, that branch of the *long-eared* family above named have but few representatives in this county, although in the estimation of the candid, they, like many other homely people, are highly *useful*, though not *ornamental*.

IMPLEMENTS.—Grain drills are used with much success in proper soils. The use of them is constantly increasing. No particular improvement during the past year now occurs to us.

MINERALS.—Coal is found in the south-eastern part of the county, of good quality, and in considerable abundance in one or two localities. It is also supposed to exist in the neighborhood of Weymouth, in Medina township; iron ore is also found there in sufficient abundance to warrant the erection of furnaces, but owing in part to want of capital, none have yet been erected. Metallic paint is found in Sharon, and promises to become a highly useful article, both as a protection against weather and fire on buildings, where applied.

The amount collected by Auditor for licenses to showmen, to which State Board is entitled, \$20. No escheated lands.

ABSTRACT FROM COUNTY DUPLICATE.

No. horses	6,171
Cattle	19,813
Sheep	101,889
Hogs	9,803

Report of the Medina County Agricultural Society.

To the State Board of Agriculture: The annual Fair of our Society was held on the 17th and 18th days of September last. The first day was devoted exclusively to the exhibition of live stock. Owing to the long continued and excessive drouth, the display in this department was inferior in the number and condition of the animals entered for competition to that of previous years, but was sufficient to entitle this to a place in the first rank, as a stock growing county.

The second day was enlivened by the presence of the ladies, and a display of their handiwork.

Prof. Brainard, of Cleveland, delivered a highly interesting and able address, a copy of which was requested by vote of the Society for publication, and will shortly appear, together with the proceedings, &c., in a pamphlet form. The Society have experienced much inconvenience for the want of suitable grounds and buildings in which to hold the annual fair.

A proposition was made at the last meeting to purchase a lot and erect a house thereon, and a considerable amount was immediately raised by the meeting for that purpose.

The Board of Directors are now engaged in this matter, and we confidently hope that before our next fair we shall be provided with every convenience necessary to render our exhibition worthy of the *agricultural* and industrial reputation of the county. We intend to be not a whit behind our sister counties in all matters of agricultural interest, and we believe that our agricultural resources, and the high character of our industrial community will enable us to maintain a high and enviable position.

Medina County Agricultural Society, organized May 19, 1846.

1846.

LUTHER GERO, President.
JARVIS STILES, Vice President.
J. T. AINSWORTH, Secretary.
A. MORTON, Treasurer.

1847.

LUTHER GERO, President.
L. WARNER, Vice President.
J. T. AINSWORTH, Secretary.
H. CANFIELD, Treasurer.

1848.

RICHARD WARNER, President.
WM. S. WELLING, Vice President.
HENRY KING, Secretary.
H. CANFIELD, Treasurer.

1849.

NORMAN CURTIS, President.
SAMUEL CLARK, Vice President.
E. L. WARNER, Secretary.
ROBERT CHAPPEL, Treasurer.

1850.

NORMAN CURTIS, President.
JAMES NEVINS, Vice President.
W. S. M. ABBOTT, Secretary.
ROBERT CHAPPEL, Treasurer.

Officers elected for the ensuing year.

J. S. PRITCHARD, President, Brunswick.
JAIRUS STILES, Vice President,
HERMAN CANFIELD, Secretary,
J. T. AINSWORTH, Treasurer,

NATHANIEL PIERCE, Brunswick.
L. B. NETTLETON, Medina.
W. R. CHIDESTER, "
J. BROWN, "
ISAAC BRONSON, "
JOS. W. FITCH, "
CICERO PHELPS, Star (D

Copy of Treasurer's Report.

MEDINA, Sept. 16, 1851.

From examination of the books of the Treasurer of the Medina County Agricultural Society, (who left town without making his report,) I find that during the year past he

Received of members	\$121 00
Received of County Treasurer.....	120 00
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	\$241 00
Paid for premiums and incidental expenses	\$241 00
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J. T. AINSWORTH, *present Treasurer M. C. A. S.*

Medina, Dec. 1, 1851.

FARMS AND CROPS.

Mr. J. S. Pritchard, first premium on farm	\$10 00
Mr. Luther Gere, second " "	5 00
Mr. Joseph W. Fitch, first premium on 2 acres corn.....	4 00
Mr. Lucius Warner, second " " " "	2 00
Mr. L. B. Brintnall, first premium on wheat.....	5 00
Mr. R. Firman, second premium on wheat.....	3 00

MEIGS COUNTY.

1. PRINCIPAL CROPS.—Corn, Wheat, Potatoes, Hay and Oats.
2. WHEAT.—Usual average yield from 12 to 15 bushels per acre. Some over an average yield this year. Price ranges from 50 to 75 cents.
3. CORN.—Usual average per acre 40 bushels; this year not more than half the usual yield. Common price ranges from 25 to 37½ cents per bushel. Surplus taken down the river. None distilled in the county.
4. HAY.—Usual product 1½ tons per acre; present season an average crop. Usually sells at about \$6 in stack or barn, and pressed or taken to market at about \$8. Surplus taken down the river.
5. POTATOES.—Average yield from 75 to 80 bushels; this year considerably short of an average crop. Kinds usually raised, Early Whites, Pink Eyes, Baltimore Blues, Neshanock, Orange, and Long Red. Usual price from 25 to 37½ cts. Large quantities shipped south.
6. OATS.—Average yield 25 bushels to the acre. Present season full an average crop. Usual price 20 cents per bushel. Principally consumed in the county.
7. RYE, BARLEY AND BUCKWHEAT.—Neither, to much extent, raised. No established price.

8. **FRUIT.**—Greater part ordinary, but, for a few years past, considerable attention has been taken to set out trees of the best kinds of ingrafted apples; peaches of the kinds most usual, but not so much attention paid to them as to apples. This season fruit of all kinds almost a total failure.

9. **SEEDS.**—Not a sufficient quantity raised for home use.

10. **DAIRY PRODUCTS.**—No more butter made than consumed. Some cheese made, but not so much as consumed.

11. **SHEEP AND WOOL.**—There are but very few wool-growers in the county. We have in the county 18,600 sheep. Quantity of wool raised 47,000 lbs, mostly common, some fine flocks excepted.

12. **HORSES.**—No improvement in the breed. Value from \$40 to \$50. Number, 3,000.

13. **CATTLE.**—8,000 in the county. Some improvement in the breed.

15. **HOGS.**—No. in county, 8,000. One-half stock, the other half pork. Considerable improvement in the breed.

16. **IMPLEMENTS.**—Little or no improvement.

17. **MINERALS.**—The coal formation in this county is very extensive. The amount sold this year 4,000,000 bushels. Some hundreds of hands engaged in the coal business.

18. **MILLS.**—There are 3 steam merchant flour mills, a great number of water mills. Steam and water saw mills quite numerous. An Iron foundry doing an extensive business, also a rolling mill doing an extensive business, and making a superior quality of iron, at Pomeroy.

19. The law relating to public shows has been enforced, and the amount collected for the agricultural fund is \$40 in gross.

Principal places of marketing are the Ohio river and Pomeroy.

N. B. SALT.—There has been a considerable quantity of salt made in the county for a number of years, but within the last year three salt wells have been sunk, and two others sinking at the present time. There is one furnace put in operation within the last year, said to be the most extensive in the western country.

STEPHEN TITUS, *President.*

J. M. GILMORE, *Recording Secretary.*

Pomeroy, December 6th, 1851.

AGRICULTURAL FAIR.

The first Annual Fair of the Meigs county Agricultural Society was held in Middleport, on the 22d instant.

The show of stock, of vegetables, and of domestic manufactures, far exceeded in quantity and quality the anticipations of even the most sanguine. An appropriate address to the audience in general, and to members of the Society in particular, was made by V. B. Horton, Esq., after which the premiums awarded by the several committees were made known.

We are fully satisfied that the impulse given by this initiatory step will be ultimately productive of great good to the agricultural interests of the county, and that another year will exhibit that degree of improvement which the wants of our county demand and the intelligence of her citizens warrant.

The following persons were elected officers for the coming year :

**STEPHEN TITUS, President,
WHITTAMORE REED, V. Pres.,
OREN BRANCH, Treasurer,
SAM. HALLIDAY, Cor. Secretary,
J. M. GILMORE, Rec. Secretary.**

The Treasurer of the Society made the following report :

Received from members of the Society.....	\$110 00
county.....	89 80
Total.....	\$199 80
Paid for printing.....	\$5 00
premiums awarded.....	118 00
	<u>123 00</u>
Balance remaining in Treasurer's hands.....	\$76 80

There was an Agricultural Society in this (Meigs) county on the 25th day of March, 1851, organized in accordance with the law, and a fair held as before stated.

STEPHEN TITUS, *President.*

J. M. GILMORE, Recording Secretary.

MIAMI COUNTY.

BY ASA COLEMAN.

In compliance with the request of the Circular of the President of the Ohio State Board of Agriculture, to the County Societies, to report on the condition of the agriculture of the county, with such statistical information as may be thought useful, "and any improvements in agriculture and modes of cultivation, renovating worn-out soils, eradicating injurious plants, &c., and suggestions generally as would tend to benefit the farming community," I would respectfully report:

The condition of the agriculture of this county is that of progress and improvement; the period is past in this county, in common with the older counties of the State, in which the principal labor of the husbandman is employed in the removal of the forest and bringing new lands under cultivation, and his attention is now

turned to a better and more systematic cultivation of the soil, and the erection of more permanent and commodious farm buildings. The log cabins and log barns are rapidly disappearing from the face of the county.

The principal agricultural products of this county are Wheat, Corn, Oats, Flax Seed, Hogs, Horses and Cattle.

The past season has been generally quite favorable to the farmer, and all the grain crops have been abundant, notwithstanding the quantity of rain which has fallen is probably little more than half the usual quantity.

The wheat crop of the past harvest will little exceed that of 1850, although there was nearly twice the product of straw.

The corn crop of the past season will much exceed that of 1850. Oats and flax seed, the yield has been very good—the latter frequently yielding twelve or fifteen bushels to the acre.

The only reliable statistics I have to report are the official returns of the township assessors, made to the Auditor's office for the year 1850, as follows :

Wheat, 26,563 acres ; 565,568 bushels ; average yield, 21.29 bushels per acre.
Corn, 31,891 acres ; 1,183,338 bushels, or 39.11 bushels per acre.

Number of Horses.....	7,417
Cattle.....	10,919
Sheep.....	22,735
Hogs.....	21,416

The wheat and corn crops here reported are thought, by many, to be much below the actual amount raised ; the township assessors not receiving their instructions to list these crops till after their having completed the listing of taxable property, and, from the short time allowed, it was considered as improperly attended to, and much short of the real aggregate amount raised.

The products of clover seed and tobacco are items of considerable importance in this county.

The yield of the potatoe crop this season has been abundant and of good quality. Very little indications of the potato disease have been spoken of.

As to the condition of the agriculture of this county, as before observed, I think it in a state of progress and improvement. Our farmers are generally adopting the improved implements of husbandry, especially the improvements in the plow. Steel plows are quite common. Wheat drills and cultivators, of various descriptions, have been tried. The shovel plow, single and double, are generally preferred in working corn. A number of McCormick's Harvesting Machines have been in use the last two years. Pitt's Threshing Machine and Separator is in general use. And what is equally important with farming implements, our farmers spare no pains in procuring new varieties of wheat and corn ; and most of those varieties worthy of note are soon introduced and diffused in this county, if found valuable. Our far-

mers are beginning to practice a more systematic mode of saving barnyard manure and its application to the soil, and, although the bottom lands of the Miami have been cultivated in corn from twenty-five to forty-five years, with little variation, and still produce as abundantly as ever, our uplands, which constitute much the larger portion of our soil, require a different treatment and mode of cropping, and a rotation of crops is generally practiced, consisting of wheat, corn, and clover, constituting a three years course. Some will, upon a clover crop plowed in, raise wheat two years, then corn two years, then flax or oats as a fallow crop for wheat, then clover two years, applying manure to the second corn crop, and plowing in the second year's crop of clover.

Some of our farmers have practised the growing of a succession of wheat crops without manuring the land; plowing in the stubble about the middle of August, and sowing wheat about the tenth of September, and speak favorably of the result when practiced six or eight years.

I have, myself, raised wheat for five years in succession upon an old field without manure, with a gradual improvement of the crop, from twenty up to twenty-five bushels to the acre. In this practice, one careful plowing is thought better than twice ploughing. The soil becomes more mellow and light than at the commencement of the cropping, and by sowing clean seed, the last crop was more clear of cockle, cheat, and weeds than the first. This has been, with me, rather an experiment, of which, with the observation of the practice of others, I am disposed to think favorably, as there appears to be no diminution of the plumpness of the berry or stiffness of the stem of the wheat, especially where the main object of the farmer is the growing of wheat on a portion of his farm, and can be done without interfering with a proper course of cultivation of the remainder. Where this practice is followed, the stubble should be cut high, removing no more straw than necessary to secure the wheat crop.

As to "any improvement in agriculture and modes of cultivation, and renovating worn out soils," I will proceed to discuss some topics, and give my views regarding the cultivation of the soil, involving what I deem some of the most important principles of agriculture. In the first place, a soil that is already in good condition, as to the best mode of keeping it up to that standard, and realizing from it annually the greatest value of vegetable products, as of wheat, corn, &c., with the least expense of labor and manure, and not to exhaust or get into the condition of worn soil, to need renovating, is a very important consideration to every farmer. To come to a right understanding upon this subject, let us take a view of the elements of which the various vegetable products grown are constituted, and of the soil itself. According to the chemist's analysis, the four elements of carbon, hydrogen, oxygen and nitrogen, constitute nearly all the organic parts of all animal and vegetable substances. But organic substances possess certain characters by which they are distinguished from inorganic or dead matter, and on which their connections with the principles of life and the art of culture entirely depends. These characteristic properties are chiefly the following:

1st. They are easily decomposed or destroyed by a moderately high temperature. If wood or straw be heated in the air over the flame of a candle it becomes charred, burns and is in a great measure dissipated. So sugar and starch darken in color when heated, blacken and take fire. The same is true of all vegetable substances. But limestone, clay, and other earthy or strong matters undergo no apparent change in such circumstances—they are not decomposed.

2. When exposed to the air, especially if it be warm and moist, vegetable and animal substances putrify and decay. They decompose of their own accord, and after a time almost entirely disappear. Such is not the case with inorganic matters; if the rocks and stones crumble, their particles may be wasted away by the rains to a lower level, but they never putrify or wholly disappear.

3. They consist almost entirely of two or more of the four organic elements only. The mineral substances we meet with on the earth's surface, and collect for our cabinets, often contain portions of many elementary substances; but with few exceptions, the organic part of all plants that live and grow, contains only the four simple substances named.

4. They are also distinguished by this important character, that they cannot be formed by human art. Many of the inorganic compounds which exist in the mineral crust of the globe can be produced by the chemist, in his laboratory, and were any corresponding benefit likely to be derived from the expenditure of time and labor, there is reason to believe that, with few exceptions, nature might be imitated in the formation of any of her mineral productions. But in regard to organic substances, whether animal or vegetable, the chemist is perpetually at fault. He can form neither woody fibre, nor sugar, nor starch, nor muscular fibre, of animals and plants, and which serve for the food of animated beings. This is important and striking, and is, I believe, likely to remain a permanent distinction between most substances of organic and inorganic origin.

To these four elementary bodies, of which the organic destructible part of vegetable substances is formed, there is an earthy residuum of less than one-fourth of one per cent. in wheat, in its ordinary state. With one exception, they are known to us only in the form of gases; and yet out of these gases much of the solid parts of plants and animals are made up; when alone, at the ordinary temperature of the atmosphere, they form invisible kinds of air; when united, they constitute those various forms of vegetable matter which is the aim and end of the art of culture to raise with rapidity, with certainty and in abundance. How difficult it is to understand the intricate process by which nature works up these raw materials into her many beautiful productions; yet how interesting it must be to know her ways, and how useful even partially to find her out.

The proportion of the elements in wheat are, in one thousand, carbon, 455; hydrogen, 57; oxygen, 431; nitrogen, 34; sediment or ash, 23.

Now as to the nature and constitution of soils. Soils differ much as regards their origin, their physical properties, their chemical constitution, and their agricultural capabilities; yet all soils, in their exciting state, capable of bearing a profit-

able crop, possess one common character, they all contain organic matter in a greater or less proportion.

This organic matter consists in part of decayed animal, but chiefly of decayed vegetable substances. Sometimes in brown, black or fibrous portions exhibiting still, on a careful examination, something of the original organized structure of the organized substance, from which they have been derived; sometimes forming only a fine brown powder, intimately intermixed with the mineral matters of the soil; sometimes only in the state of organic compounds, more or less devoid of color, and at times entirely soluble in water. Good wheat soils are said by Prof. Jas. F. W. Johnson, to contain from 4 to 8 per cent., and if very stiff and clayey, from 10 to 12 per cent. may be occasionally detected of organic matter. The earthy part of the soil consists principally of these ingredients:

1. Silica—silicious sand or silicious gravel;
2. Alumina—generally in the form of clay;
3. Lime, or carbonate of lime;

And a soil is called sandy, clayey, or calcareous, as either of these predominate.

Sprengel, as quoted by Prof. Johnson, estimates the quantity of earthy matter removed from the soil in an acre of wheat of 25 bushels, at 17.75 in the wheat, and 105.54 in the straw produced, making an aggregate of 123.29 of earthy matter in the gross of 4500; but as one-third of the straw is usually left on the ground, this estimate is that much too large; in green crops, the amount of earthy matter is that much less, in general about one-third as much in the thousand pounds.

The object in making these statements, as to the elements and their amount entering into the products of vegetation, and the composition of the soil, and the amount of earthy matter supposed to be drawn from that source, is to show the great relative importance of husbanding and securing these volatile elements which form so large a portion of organized matter, which is the aim and object of agriculture to produce, and to demonstrate that the frequent cropping and removal of the same is not the only exhausting influence to which the soil is subjected.

That the quantity of vegetable or organized matter in the soil or its elements is the great stimulus to vegetable productions, is a truth admitted by all; and I hold it to be equally true that the soil is undergoing a continual decomposition and change in its organic elements, when plowed and frequently stirred, without any growing crop upon it, and if kept in that condition through the summer season will become more exhausted than to raise a crop of wheat upon it. The effects of plowing and mellowing the soil for the production of a crop of any kind, greatly facilitates the decomposition of the organic matter of the soil, which is by the process brought into an active condition to promote the growth of vegetation, and if not returned upon the surface by a crop of vegetation, or some surface protection, these gaseous constituents are in a great measure evaporated and scattered to the winds. Here rests a great and important principle—involving the preservation and ex-

haustion of the soils; and I hold that soils are mainly exhausted in this manner by cultivation, and not by the removal of crops and inorganic matter contained in them. Experience shows that the gases from decomposition of the organic matter of the soil, may be retained upon the surface by a covering of dead organic matter, as well as living, till the same in its turn undergoes decomposition. Many of the phenomena of vegetation may be readily explained upon this principle, upon which the chemical agriculturist appears entirely at fault, by attempting to found a theory of agriculture upon the inorganic constituents of the soil. When the soil is sufficiently covered, not only are the gaseous products of decomposition returned, but large accumulations from the same substance floating in the atmosphere, which is the principle upon which lands in a state of nature grow rich, by adding organic matter to the soil drawn largely from the atmosphere. Upon this principle, I hold that every farm in Ohio may be made of any desirable richness, by raising and turning under green crops.

The principle here described, I term *surface protection*. In the United States, where we experience such great extremes of temperature, compared with England and the north of Europe, the soil undoubtedly suffers much more when exposed and unprotected, than in those countries; the heats of summer and the colds of winter, when evaporation is great, appear particularly injurious to the naked soil. We occasionally hear a farmer speak of having a field 'killed out,' as they term it, or materially injured from being left through the summer, from the failure of some crop, and not permitted to have even a crop of weeds for protection. The cold of winter upon soil turned up to lie naked for a spring crop, has been found injurious, except it may be in a stiff clay soil that has lain sometime in grass. We occasionally see a farmer plow a clover field in the fall, for planting in the spring following, with a view to destroy the cut-worm. I have heard some of these say they believed they had killed the soil as well as the worms, having found the result evidently injurious. Most farmers have observed the effect of surface protection on a small scale, perhaps more where the surface has been covered with dry matter than with growing vegetation, and speak highly of its effects in enriching the soil, and talk of the influence of shade as a manure, without comprehending or understanding the universal cause of this favorable influence, or thinking of making a general application of the principle in their farming operations. That surface protection acts as an important fertilizer, either of dead or growing vegetable matter, in retaining the decomposing organic matter of the soil upon the surface, or from the atmosphere, a little practical attention to the subject will fully demonstrate to any one. I deem an attention to this principle, of great importance in the saving and application of manures, to realize the greatest advantage from their application to the soil. A little reflection of the practical farmer, acting upon this principle, will suggest many ways and modes by which he may retain and increase the fertility of his fields, and prevent that rapid exhaustion which results from a necessity, where his fields are left uncovered and unprotected from the heat of sum-

mer and the cold of winter, and realize a much greater advantage from the various fertilizers he may employ. Plowing in the spring for sowing in wheat in the fall is now almost entirely discontinued, and not plowed till August, and the wheat sown in September.

Upon the principle of surface protection, we may most readily account for the improvement of the soil in meadow and pasture lands, which, although pastured or mowed, and the crop removed for three or four successive years, there is an evident improvement of the soil for after tillage; and I would here observe, that pasture lands, if not pastured too early in the spring, or fed too close, but left in what is termed good pasturing condition, will, if kept in that condition, yield a much greater amount of pasturage during the season, and the soil improve more and be easier kept in good condition. This results from the greater protection of the surface, and the consequent greater opportunity of the requisite supply of food from soil and atmosphere; thereby adding materially to the organic matter of the soil, and making it more productive when put in cultivated crops.

I would make a remark as to the preservation of the fertility of the soil of lands cultivated in corn, which in many counties in Ohio is the greatest staple product, taking precedence of wheat, as, from the practice of many of our farmers cutting up their corn for fodder, especially in the cattle raising counties, leaving the soil naked for the winter months, it must necessarily deteriorate if often repeated. Especially on upland, when it is intended to cut up corn on land not specially rich, I would recommend the sowing of rye, one bushel and a half to the acre, at the last plowing of the corn. It may be sown as early as the 10th of July to the 20th. It will pay well in fall and winter pasture for young sheep and cattle. If the ground is intended for corn the next season, the rye should grow till about the tenth of May, when it will be of the height of two feet, or beginning to head, when it should be harrowed down and plowed under, and immediately planted in corn. The rye affords a good surface protection through the winter, and serves as a valuable coat of manure.

The practice I have pursued in tilled land, is a systematic rotation of crops of wheat, corn and clover, a spring crop of oats, barley or flax preceding the wheat; or plow in a fall crop of clover before wheat, and a spreading of barn-yard manure before corn, and raise two crops each of wheat and corn, with an evident improvement of the soil. During the last fifteen years, this rotation I have followed, upon an upland farm of forty years in cultivation.

From these considerations, I hold that the soil of tilled lands becomes more worn and exhausted by the long exposure to atmospheric influence, in the production of some crops, than by the crops themselves; as, for instance, cotton and tobacco, and other crops considered most exhausting. The amount of vegetable matter removed in the crop is small, compared with other crops which furnish a good surface protection, and little exposure of the soil, four times the amount of vegetable product is removed without any apparent exhaustion of the soil. This I consider

to be the true theory of the exhaustion of soils, as all soils in a state of nature more or less accumulate and increase in a compound ratio, as they accumulate according to the more or less favorable locality.

This appears to me to be a very important principle, to be kept in view in all the agricultural operations of the farmer.

While the chemist says feed, feed your plants, I say not only feed them, but take care that the food intended for them is properly husbanded, and not allowed to go to waste upon the wings of the wind, when it is in our power to control and retain it for its intended sphere of action. As the farmer shelters and protects the food intended for the stock of his farm, so may he shelter, protect and retain the organic elements in the soil and out of it, which are necessary to be brought into use in the production of the desired vegetable products, which organic elements are continually undergoing decomposition into gaseous elements in and out of the soil, especially upon stirring the soil. By keeping this principle in view, much may be done in the saving and application of manure, and a proper attention to surface protection in plowing up the soil, nor to let it remain any longer without a growing crop than is requisite to put it into proper condition to receive the same. We see the benefit of this in early sown wheat that has had time to spread and cover the ground before winter, always, so far as the soil is concerned, producing a better crop and leave the soil in a better condition than late sown wheat. Some even recommend to sow oats with wheat as a surface protector and manure. I have found late sown wheat more benefitted by a spreading of straw of the same variety of wheat, to prevent mixing of varieties, than the ordinary application of manure.

Also, straw and other long manure spread upon wheat sown on clayey soils, applied in the fall of the year, has been found very useful as a surface protection through the winter, thereby preventing freezing out, and its decomposition in the spring season acting as manure.

Again, I think I have found more benefit from straw as a manure, where the crop has been threshed in the field and the straw spread over the ground and remained till spring, then plowed under and planted in corn, than from the same amount of straw fed out in the barn-yard, and the manure hauled out and spread over the ground the next season. It will become partially decomposed, and not be at all in the way of the cultivation of the corn crop. Many more cases might be cited of the great benefit of surface protection, which will occur to the mind of the observing farmer; but I think the subject requires more attention, and should be more practised upon in our farming operations.

My object here has been to state the result of my observation and experience in retaining and increasing the fertility of the soil, without attempting a scientific explanation of the principles involved, as to the formation, absorption and emission of gaseous compounds by the soil or plants during their growth. I think, however, we have rather to look to the vegetable physiologist than the chemist, for an explanation of many of the phenomena of vegetable organization.

I hold that the manuring, with clover or other green crops, in the full sense of the term, that is, the plowing in of the full crop, or the greater portion of it, once in four or five years, in a rotation of other crops, with a proper attention to surface protection, is the cheapest and most uniform and most effectual method that the Ohio farmer can pursue, in addition to the saving of barnyard manures. The labor required in this process of manuring, which is a very important consideration with the Ohio farmer, and the uniformity of the growth over the field, necessarily make a uniform application of the remedy. The process should of course be repeated more or less often, according to the condition of the soil, to keep it up to the required standard of fertility; and I think that the farmer that pursues this course with his farm, need labor under no apprehension that he is impoverishing his soil, load by load, as he hauls his wheat, corn and pork to market. An all-wise Providence has given him the means with the farm, of maintaining and increasing its fertility, without a resort to the battle-fields of Europe for bone dust, or to the islands of the Pacific for guano, although I have no objection to the use of these and other mineral manures, in addition, when they can be obtained upon terms to justify their use.

As to the best method of renovating worn soils.

I believe that every farm in Ohio has within itself a self-renovating principle, if rightly used, to be made abundantly rich for the production of good crops of wheat and corn, by a proper attention to surface protection, a careful saving and accumulation of barnyard manure and a right application of the same, together with the plowing in of green crops and turning up the soil deep, there need be no difficulty in restoring worn soils that have been exhausted of their organic principles by too frequent and long exposure to atmospheric influences.

Clover and rye are the best crops for green manure in this climate. If the soil is benefitted by plowing in a clover stubble, after the removal of one or two crops of clover, experience shows a proportionate benefit, by plowing in as large a crop as the soil will produce. Clover is a crop that gives a good surface protection and draws largely from atmospheric sources of nourishment; hence its great utility as a manure. Green substances contain within themselves much water, and undergo decomposition more readily than such as have been dried, and are more immediately serviceable when mixed with the soil. Rich vegetable matter will also undergo a comparatively rapid decomposition even when buried to some depth beneath the soil, and the elements of which it consists will form new compounds more or less needful to living plants, in circumstances where dry or partially decomposed vegetable matter would undergo no change whatever.

Professor JOHNSON, in his lecture on Agricultural Chemistry, in speaking of the practical results of green manuring, says:

"1st. The plowing in of green vegetables on the spot where they may have grown, may be followed as a method of manuring and enriching *all* lands. Where

other manures are less abundant, growing plants bring up from beneath, as far as their roots extend, those substances which are useful to vegetation, and retain them in their leaves and stems. By plowing in the whole plant, we restore to the surface what had previously sunk to a greater or less depth, and thus make it more fertile than before the green crop was sown

"2d. This manuring is performed with the least loss by the use of vegetables in the green state; by allowing them to decay in the open air, there is, as above stated, a loss of both organic and inorganic matter; if they be converted into (farmyard) manure, there is also a large loss, as we shall hereafter see, and the same is the case if they be employed in feeding stock with a view to their conversion into manure. *In no other form can the same crop convey to the soil an equal amount of enriching matter, as that of green leaves and stems.* Where the first object therefore in the farmer's practice, is so to use his crops as to enrich his land, he will soonest effect it by plowing them in, in a green state.

"3d. Another important result is, the beneficial action is almost immediate; green vegetables decompose rapidly, and thus the first crop which follows a green manuring, is benefitted and increased by it. But partly for this reason, also, the green manuring of corn-cropped land, if aided by no other manure, must generally be repeated every second year.

"4th. It is said that grain crops which succeed a green manuring, are never laid, and that the produce in the grain is greater in proportion to the straw, than when manured with fermented dung.

"5th. But it is deserving of separate consideration, that green manuring is especially adapted for improving and enriching soils which are poor in vegetable matter. The principle on which living plants draw a part — sometimes a large part — of their sustenance from the air, has already been discussed, and I presume you sufficiently understand the principles and admit the fact."

Living plants then contain in their substance, not only all they have drawn from the soil, but also a great part of that they have drawn down from the air. Plow in these living plants, and you necessarily add to the soil more than was taken from it; in other words, you make it richer in organic matter. Repeat the process with a second, and it becomes richer still; and it would be difficult to define the limit beyond which the process could be no further carried.

Connected with the subject of the improvement of the soil in Ohio, is that of the analysis of the soils of the State, by a Chemist and Geologist appointed by the State Board of Agriculture of Ohio, to reside at Columbus, with a liberal salary and liberal fees from county societies and individuals, who are recommended to have the goodness of the soils of their counties or farms scientifically analysed and reported upon, and informed what is requisite to add thereto to make the same more productive. Great results for the benefit of agriculture in Ohio, we were told, would result from this expenditure.

The Agricultural Society of this county dissented from this expenditure, and require me to state some of the reasons :

First. They have no evidence that any Chemist has the skill to impart valuable agricultural information from the analysis of eight or ten small particles of soil, from an area of 400 square miles of territory ; and they have little faith in the test, from the same number of samples from a farm of 160 acres.

Second. This county does not abound in mineral manures — except lime and vegetable organic manures — and the farmers think they appreciate the use and application of them.

Third. The Chemist usually recommends, in the application of his remedies for the improvement of the soil, a trial upon a small scale, as a test, which can be done as well without analysis as with.

Fourth. All the Chemical Agriculturists agree, that organic manures, such as barnyard manure, and the plowing in of green crops, are good manure for all soils to increase their fertility, and this without regard to climate or locality, and other circumstances which influence vegetation.

Fifth. We think the Chemist has been led into error, by giving too much attention and place to the inorganic constituents of the soil and vegetation, and not sufficient attention to the organic elements, and the sources from which they are derived and called into requisition, in the progress of vegetable organization.

Sixth. The chemical theory founded on the inorganic constituents of vegetables and the soil, which in no case will amount to one part in the hundred of vegetable products, paying little attention to the organic elements on which their value solely depends as food, and constituting ninety-nine parts in the hundred of all mature plants in the green state, and that the restoration of the small amount of inorganic elements in the ash to the soil, will prevent deterioration," which we cannot reconcile with the result of our experience and observation.

Seventh. It has been admitted by some of the Chemists, that vegetation, wheat for instance, produced on soils quite variant in inorganic constituents equally good crops, which afforded an ash of quite different qualities and proportions, and also that different manures produced like different results in the ash.

Eighth. Is there any fixed and certain standard for the analysis of the soil, particularly for that of Ohio ; or will it be necessary for the farmer, under the varying condition of his soil from tillage, to resort to the Chemist annually with his specimens of soil for analysis, in preference to the ordinary experimental course of the farmer ? I will here make a quotation or two from *Bousingault*, p. 42, one of the most noted of the French Agricultural Chemists : " The principles, in illustration, usually met with in the ashes of vegetables, are always found in the soil which exercises the greatest influence upon the saline earthy matters which remain after the combustion of the plants. Those which grow in a soil derived from silicious rocks, yield ashes which are richer in silica than those that are produced in a calcareous soil. But according to M. de Saussure, the quality of the manure has a still

more decided influence on the nature of the ash, than the geological constitution of the soil. According to this observer, plants of the same species which have grown on a calcareous sand and upon a granitic sand, contain the same kind of ashes, if they have been manured by the same kind of dung; and different species, although growing in the same earth, do not contain the saline and earthy constituents of their ashes, in the same proportions."

The same writer, in speaking of Kirwan's remarks, page 237, says, the conclusion to which this celebrated Chemist came, was this: "That the soil best adapted to wheat in a rainy country must be viewed in a very different way with reference to a country where rains are less frequent. The fertility of light sandy soils is notoriously in intimate relationship with the frequent fall of rain. At Turin, for example, where a great deal of rain falls, a soil which contains from 77 to 80 per cent. of sand, is still held fertile, while in the neighborhood of Paris, where it rains less frequently than at Turin, no good soils contain more than 50 per cent. of sand. A light sandy soil which in the south of France would be of only inferior value, presents real advantages in the moist climate of England. Irrigation supplies the place of rain, and in those countries or situations where resource can be had to it, the question in regard to the constitution of soils loses nearly the whole of its interest. Sand that can be irrigated, has only to be loose and permeable in order to have the whole fertility developed, which climate and manure can confer. Sandy deserts are sterile because it never rains."

A distinguished German chemist observes, that "if we would examine the goodness of the soil chemically, nothing else remains than to examine the soil in eight or ten places on the space of three or four acres, and from the result found, deduce a mean, and thus to draw the conclusion respecting its general fertility; for the examination of a single place might lead to very erroneous conclusions."

The place examined might have an excess of nutritious substances, while other portions of the tilled soil might be deficient in them; and this might easily cause a person to mistake, by over estimating its fertility, or *vice versa*.

From the influences here referred to, among many others, we are necessarily brought to the conclusion that it is an idle waste of money for the Ohio farmer to resort to the Chemist to learn him the best mode of improving his tilled lands; much better to use his own judgment based upon common observation and the previous productiveness of his fields, and a liberal use of the means of improvement at home, based upon their known influences, joined with a systematic rotation of crops. The eye of the practised farmer will prove a much surer guide, in a general way, than the analysis of the Chemist.

While rejecting the theories of the Agricultural Chemist, founded on the analysis of soils and the ash of vegetables, termed the ash theory, I would by no means discard chemistry from agriculture. Chemistry has done much in explaining many of the phenomena of agriculture, and has conducted very much to its improvement; it is what I conceive to be its erroneous theories based upon partial views of some

of the wonderful operations of nature concerned in the growth of vegetables, and claiming as the result of scientific discoveries the application of mineral manures, &c., which have been the result of long experience, before the introduction of agricultural chemistry.

Bousingault (p. 303) admits that practice got the start of science in the application of mineral manures or stimulants: "If their useful influence cannot be denied, as it cannot—if the circumstances in which it is advantageous to administer them—if the condition and doses in which they ought to be given to the ground, have been the subject of long and careful observation with farmers, it must still be admitted that we are far from understanding in what way they act; this is another motive for continuing to study them with perseverance."

A new material in making fence, has been introduced into use in this county, the past year, which promises to be a valuable acquisition in the Miami Valley, in some sections of which timber for fencing has become quite scarce. It consists of the common coarse lime, sand and pebbles, up to the weight of half a pound or larger, which so abundantly abounds in this section of country, mixed with sufficient lime to unite into a mass. The mode recommended of constructing, is as follows: A trench is dug on the line of fence to be made, eight or ten inches in depth and one foot wide, and filled with small boulders or rubble stone of every description, as a foundation, to prevent the action of frost; upon this foundation the material is laid up, consisting of eight or ten bushels of gravel to one of lime, previously well mixed, a casing of an inch and a half plank 12 or 14 inches wide, and confined so as to form a wall of about ten inches at the base; this is filled by shoveling in the material to the depth of the casing, and allowed to stand 12 or 24 hours, then the casing raised and another layer added, till the desired height is obtained, contracting the casing so as to make the wall eight inches thick at top; a height of four and one-half feet does very well, especially with a wire suspended six or eight inches above the wall by supporters inserted while the wall is erecting. Two wires, six or eight inches apart, make a secure garden fence, the wire preventing the passage of fowls, dogs, &c. In long lines, I would recommend buttress projections, one in fifty or a hundred feet. It may be stained of any color to suit the fancy of the builder. This forms a very cheap, durable and ornamental fence, in situations where the materials are convenient. Its use here was introduced by Mr. George Pughterbaugh. Its utility will be thoroughly tested in this section of country:

MIAMI COUNTY AGRICULTURAL SOCIETY.

SECRETARY'S OFFICE,

TROY, Dec. 1st, 1851.

To the Hon. State Board of Agriculture:

In compliance with your requisitions, and as an addenda to the report of the president, (Dr. Coleman,) which is herewith transmitted, the following is respectfully submitted from this office:

The Miami County Agricultural Society has been organized and sustained for five years. In that time it is believed that the doubts and fears that always surround such public institutions have been dissipated, and that in future the Society is to remain upon a sure foundation, and will exert an influence that will tell for good upon the agriculture of the county.

The last annual fair was held in Troy, on Thursday and Friday, the 2d and 3d of October, 1851.

Thursday, the first day, was devoted to the field exhibition of stock, etc. In this department, with the exception of horses, the display was not a fair representation of what Miami county can do in the stock line. The array of horses on the grounds was highly creditable, but was nothing more than an index of what the county could do in each department, if our farmers had but made a corresponding effort to have each properly exhibited.

Friday, the second day, was devoted to the in-door exhibition, of grains, vegetables, manufactures, mechanic arts, etc., etc.

The great interest of the fair seemed to centre in this day's exhibition. This is probably owing to the fact that artisans are generally more awakened to the importance of improvement than the agriculturists. This ought not so to be, particularly in our county, which is much more an agricultural than manufacturing district.

At the annual election for 1851 and 1852, the following gentlemen were elected to serve as officers of the Society for the coming year:

Dr. ASA COLEMAN, President.	
WILLIAM L. THOMAS,	} Vice Presidents.
JOS. MCKAIG,	
JACOB KNOOP, Jr.,	
M. M. MUNSON, Cor. and Rec. Secretary.	
GEO. D. BURGESS, Treas. and Lib.	

AGRICULTURAL COMMITTEE.

JOHN HARKER, Chairman.
 JAS. M. DYE.
 JOSIAS WESTLAKE.
 JOHN D. FOWLER.
 WM. B. McCLUNG.

Post office address of the principal officers of this Society is Troy, Miami County, Ohio.

Below is appended the annual exhibit of this Society as seen in the Treasurer's report. The financial condition of the Society is decidedly better than in former years, with a prospect of a further improvement in time to come.

Respectfully submitted.

M. M. MUNSON, *Sec. Miami Co. Ag. Soc.*

Treasurer's Report.

Nov. 1, 1850—To balance in treasury.....	\$28 97
" " 1851—To amount fees of members.....	115 00
" " " To funds from County Treasury	115 00
" " " To receipts at door 2d day of fair	7 70
	<hr/>
	\$266 67

CONTRA.

By cash paid orders for premiums.....	\$204 75
" expenses of delegate to State Board.....	15 00
" for printing bills, &c.....	7 00
" periodicals and postage	8 00
" binding periodicals.....	3 25
" new vols. for library	1 00
" book case for do	5 00
" expenses at Fair.....	2 00
	<hr/>
	\$246 00
Balance in Treasury	20 67
	<hr/>
	\$266 67

GEO. BURGESS, *Treas. Miami Co. Ag. Soc.*

Dec. 1st, 1851.

MONROE COUNTY.

Report of the President and Secretary of the Monroe County Agricultural Society.

To the State Board of Agriculture:

GENTLEMEN: In compliance with the law "for the encouragement of agriculture," we respectfully submit our first annual report. We will take this occasion to say, however, that our report is not so full as we had intended, owing to the fact that we were in error as to the time of the meeting of the State Board, and had set apart a day for making our report, subsequent to the time at which it is made, when we expected to have embodied many facts which we are now compelled to omit.

Our Society was organized on the 25th day of December, 1850, in pursuance of a call published in our county paper. On that day a very respectable number of

our farmers met, and manifested a strong desire to awaken an interest throughout the county, on the subject of agricultural improvement. Some forty persons became members of the Society on the day of its organization. After the constitution and by-laws were adopted, a resolution was passed instructing the Board of Managers to publish, by the first of April following, a list of articles for which premiums would be offered at the first annual fair. The object of this resolution was that ample time might be given to farmers and others to make preparations for the fair. It was feared unless this was done that our first exhibition would be a meagre affair. In this, however, the Board of Managers, as well as the people of our county generally, were agreeably disappointed. We are assured that our first attempt at holding a fair compared favorably with the fairs of older societies. We had 23 entries of cattle, 48 entries of sheep, 40 entries of horses, and 13 entries of hogs, the majority of which were of superior breeds. Under the head of domestic manufactures we had some forty entries, which were exhibited on the second day of the fair, in the court house, and attracted the attention of quite a crowd of interested spectators.

We have no doubt but this Society will exert a great influence throughout the county, and will eventually be productive of lasting benefits to our agricultural community. Even now our farmers are beginning to bestow much pains in the renovation of their worn out lands, and to exercise judgment in the selection of their agricultural implements.

The principal crops and productions of the county are wheat, corn, oats, hay, tobacco, buckwheat, fruits, horses, cattle, sheep and hogs.

This year the fruit crop was an almost entire failure. Perhaps not one apple orchard in fifty produced enough to supply the family of the owner with winter fruit.

The tobacco crop this year was very short, on account of the drouth. This is the principal crop for export grown in this county. No other county in the State perhaps equals it. We have no accurate means of knowing the number of hogsheads produced this year, but believe it will not fall far short of 2,500 to 3,000 hhds. Price this year lower than usual.

Much attention is beginning to be bestowed to the growing of wool; and we are of opinion that at no distant day it will be one of our principal articles of export.

The culture of wheat is also receiving more attention than formerly.

We have no particular improvements in agriculture and modes of cultivation to note. Some of our farmers have been well paid by the use of lime in renovating worn out soils. Land that was thought too much impoverished for corn was this year made to produce a large yield by the use of lime—so large indeed, as to astonish those who had been accustomed to notice the yield or product grown by the former owner of the same land.

This Society, as before stated, organized on the 25th of December, 1850, when the following officers were elected :

BENJ. HUGHES, President, Stafford.
 JOHN KERR, Vice President, Woodsfield.
 JAMES R. MORRIS, Secretary, do
 NATHAN HOLLISTER, Treas. do

On the second day of our late fair the following officers were elected for the ensuing year—(P. O. address also attached.)

JOSEPH MORRIS, President, Woodsfield.
 BENJ. R. DRIGGS, Vice President, Woodsfield.
 NATHAN HOLLISTER, Treasurer, "
 JAMES R. MORRIS, Secretary, "

JAMES WALTON, JR., Sunfish.
 STEPHEN FORD, Woodsfield.
 CHARLES TALBOTT, Bares.
 JOHN B. REED, Stafford.
 THOS. MITCHELL, JR., Antioch. } Managers.

There are no escheated lands in this county, nor have there been any shows therein during the year past.

B. HUGHES, *President.*

JAS. R. MORRIS, *Secretary.*

Report of the Treasurer of the Monroe County Agricultural Society.

RECEIPTS.

Amount received from members	\$120 00
Amount received from county	100 00
	<hr/>
	\$220 00

EXPENSES.

Paid for diplomas, &c., &c.....	\$9 50
Amount paid on premiums	100 00
Amount of premiums awarded and not yet paid out.....	30 00
Amount of expenses of delegate to attend meeting of State Board	25 00
	<hr/>
	\$164 50
Balance in Treasury	<hr/>
	\$55 50

N. HOLLISTER, *Treasurer.*

MUSKINGUM COUNTY.

1. **WHEAT CROP**—Of the county this year was good, both as to yield and quality. It was about similar, in every respect, to the crop of last year. Several new varieties by way of experiment, were introduced in the fall, among which is the Australian. Price has been established at 55 cents.

2. **CORN**—Owing to the extreme drouth the latter part of the season, made but a poor average yield. On loose and alluvial soils the number of bushels raised is fully an average, though the corn is light and husky, but on clay soil, and elevated ridge lands, there were many fields which would not average more than from three to five bushels per acre, having been injured by the wire worm. This enemy to the corn is greatly increasing within the few past years, and seems to threaten destruction to the crop, on certain soils. It is said, by some, that our recent open winters have contributed to the multiplication of this enemy. I have yet heard of no practicable remedy against the evil. Price, from 28 to 31 cents.

3. **OATS**.—Affords a tolerable crop, and is of good quality. There is a species of side oats, which some call the "head oats," that does the best of any variety that has been tested in our soil. It has a stiffer straw, stands up better, and weighs from 6 to 10 pounds more to the bushel than the common oats. But it requires to be sowed thicker on the ground. I have never had to reap my oats since I have used this kind, which is some seven or eight years, whereas previously, while sowing the common kind, I have frequently had to reap the entire crop. This head oats either stands up, or so leans, that it can be mostly taken with the cradle. Price this year, from 15 to 25 cents.

4. **POTATOES**—Bid fair, in the fore part of the season, to give a fine yield; but while the tubers were yet small they were attacked by innumerable thousands of the potato bug, a slim bug about three-fourths of an inch in length, which consumed, in a few days, all the leaves, there remaining nothing but the bare stems. Of course this put an end, at once, to the growth of the roots. There were some patches not visited with this destroyer; there the potatoes were fine. Price, 50 cents per bushel. If any one has a practical method of destroying this depredator, he would render a valuable service by making it known to the public.

5. The sweet potato has become an article of considerable domestic consumption. The crop this year, owing to the excessive drouth, was short. Price, in the fall, \$1 50 per bushel for a good article. That which is most in the way of producing this desirable vegetable, is the difficulty of keeping the seed through the winter. This prevented us for many years from cultivating the article, unless it was a few occasionally. But we have adopted a method which has supplied us, for the last eight or ten years, without much trouble. We take a box of suitable size and fill it with alternate layers of wheat chaff (oats will not do) and potatoes—set it in the room at a suitable distance from the cooking stove, and there let it remain through the winter, taking care to keep it off the floor so that dampness may not affect them. It having been suggested that this method might do in a small

way, but that it would not answer for keeping any quantity, by way of testing the matter I put up, this fall, two barrels of large potatoes for eating, in the same way—set them in the corner of my cooking room, one on the top of the other, and my seed boxes on the top of all, and at this writing, Jan. 22d, cold as the winter^{*} has been,* the potatoes are as sound as the day they were put up. If this quantity would keep well, any other quantity would keep as well, under the same circumstances. Much, however, depends upon their being put up in good condition in the fall. Since the failure of the Irish potato, the cultivation of the sweet has become of more importance. The latter can be raised with nearly the same labor, as the former, and the ground will produce in the neighborhood of double the quantity. We are satisfied, from practice, they do better propagated from the plants or sets than from the roots. So soon as the hard freezing weather is over in the spring, prepare a box of boards the size you may want, fill it some twelve or fifteen inches with fresh stable manure, cover over with about six inches rich loose soil, sandy is best, put your potatoes an inch below the surface. In cold or stormy weather cover your bed with boards, and in due time you will have plenty of sets.

6. The apple and peach crops were entire failures, except on very elevated situations.

7. There has been several important manufacturing establishments put into operation, in our county, during the year, but I have not the particulars to give. Our railroad prospects seem to be giving a new impulse to business.

Our Agricultural Society held its fourth annual exhibition on the 16th and 17th of October, 1851. The number of members is 257, who contributed \$253. This is the greatest number of members we have had any year yet, by 49, and the largest amount contributed, by \$27. The show was, on both days, far more exciting, in every respect, than any preceding one. It gave great satisfaction to the whole community, and the operations of the society are having a fine influence upon the agricultural and horticultural interests of the county. The spirit of competition excited is inducing our citizens to seek after the best grains, the best stock, &c., at more or less cost. Several of our best farmers, who have been, heretofore, for reasons satisfactory to themselves, cold and apathetic in relation to our enterprise, came on, this year, with their stock and other articles, and took an active part on the occasion.

The friends of agriculture have had it in contemplation, for some time, to either rent or purchase a piece of ground on which to erect permanent fixtures for our annual shows, so as to make more accommodating arrangements, and to avoid the expense of shifting every year. A committee was appointed at the close of the fair to look up a lot for this purpose. The town council of Putnam have offered them, free of charge, a suitable site on "Putnam Hill," immediately west, and overlooking the city of Zanesville. There are ten acres in that location, granted by

*The thermometer has stood as low as 20 degrees below zero.

the original lot owners of Putnam, for public purposes, that is now unoccupied. So, it is to be hoped that this very desirable situation will be improved for the benefit of the agriculture of the county.

There is \$125 or \$130 in the county treasury, (the account was not accurately made out when I inquired), arising from tax upon shows, which will shortly be handed over to the State treasury for the benefit of the State Board of Agriculture. I hear of no escheated lands.

The Circular from the President of the State Board of Agriculture calls for the date of the "organization of our county society, and what officers have served in the successive years of its existence, with their post office addresses," in order, I presume, to have these facts in the office of the Board, as matters of reference.

The friends of agriculture in the county, pursuant to public notice, held a preparatory meeting at the Eagle Hotel, in Zanesville, on the 21st January, 1848, and appointed temporary officers. And on the 7th of April, 1848, they finally organized, by adopting a constitution and by-laws, and electing permanent officers, who were as follows:

C. SPRINGER, President, Meadow Farm	P. O.
G. W. GIBBONS, Vice Pres., Zanesville	do.
JAMES L. COX, Treasurer,	do. do.
URIAH PARKER, Secretary,	do. do.

The second year the old board were all re-elected as above, except G. W. GIBBONS; JAMES FINDLAY, of Concordia, being elected Vice President in his place.

The third year the following officers were elected:

C. SPRINGER, President, Meadow Farm.
JAMES FINDLAY, V. President, Zanesville.
JAMES L. COX, Treasurer,
U. PARKER, Secretary,

The fourth year the following were elected:

C. SPRINGER, President, Meadow Farm	P. O.
ISAAC DILLON, Vice Pres., Zanesville	do.
J. L. COX, Treasurer,	do. do.
EDWARD BALL, Secretary, Putnam	do.

For the fifth, or the present year, the following are the officers:

C. SPRINGER, President, Meadow Farm	P. O.
I. DILLON, Vice President, Zanesville	do.
J. L. COX, Treasurer,	do. do.
JOHN BERNARD, Secretary,	do. do.

JAMES T. CHERRY, Putnam,	} Managers.
A. C. HOWARD, Zanesville,	
S. RODMAN, Hopewell,	
DAVID PRAIRS, Zanesville,	
THOMAS FINNEY, Blue Rock.	

The above officers are all at their respective posts, except G. E. GRIFFITH, removed west, and U. PARKE, one of our most useful and lamented members, has deceased. Though a number of the P. O. addresses are in Zanesville but few live in town.

The Treasurer's report says we have received, this year, from members	\$258 75
From county treasury	200 00
Total	\$458 75
Offered for Premiums	558 75
Awarded Premiums	434 75

C. SPRINGER, *President.*

PERRY COUNTY.

Ohio State Board of Agriculture:

Enclosed are printed lists of the premiums offered and awarded by the Perry County Agricultural Society, for the year 1851; also, the statements of the competitors for premiums on crops.

Our Society was organized in May, 1850, and commenced operations with about sixty members. Our first Fair, held in October of that year, was a small matter to be sure, yet it gave good encouragement to the working members of the Society to make renewed exertions to increase the number of members, and get up a better Fair. Our exertions were rewarded, with at least partial success. Our Society now numbers about one hundred members; and our second annual Fair, held on the 10th of October last, exceeded our most sanguine expectations. A much larger amount of stock, and that of much better quality, was exhibited, than was generally known to exist in the county. Quite a number of the animals on the ground had been introduced from other more favored counties, within the year. A number of new, improved agricultural implements was on the ground. But the most charming feature of the whole, was the large amount of articles of domestic manufacture, of such superior quality as to do credit at any county fair, the work principally of our farmers' and mechanics' wives and daughters. A large concourse of our citizens attended during the day, which closed with satisfaction and delight to all concerned.

This Society may be regarded as established on a firm basis. Two days will be devoted to our next year's exhibition.

The following statement of the principal crops and agricultural productions of the county, are as nearly correct as our information on the subject would permit.

AARON JOHNSON, *Preside t.*

WM. J. CLARKE, *Sec'y.*

PRINCIPAL CROPS.—Wheat, corn, wool, oats, hay, tobacco, and potatoes.

WHEAT.—A great number of varieties are sown. Mediterranean, Golden Chaff, Bluestem, Red Bearded, and White Bluestem, are probably the principal. This last is a new variety here, lately introduced from Pennsylvania, and bids fair to supersede all others. Its vigorous growth on even thin soil, large well formed head, white, flinty, and exceedingly heavy grain, render it a favorite with every farmer. The average per acre this year, say 15 bushels—the aggregate 450,000 bushels. Marketed at Zanesville, Thornville, and Lancaster, and sells at this time at 53 cts. per bushel.

CORN.—The usual average per acre, 30 bushels. Present crop far below average.

WOOL.—Sheep are extensively raised for wool; few are slaughtered. Merino and grades are preferred, and sell readily at high prices. We have many flocks of superior quality. The wool of the best was sold this year at 55 cents per pound. This branch of husbandry is rapidly extending in this county.

OATS.—Oats generally average about 35 bushels per acre. The common variety is usually sown; worth 16 to 18 cents per bushel.

RYE AND BARLEY.—So little grown as to be unworthy of particular notice.

GRASS AND HAY.—The grasses most used for hay and pasturage are timothy, clover, and red-top. The two former are frequently raised on upland. Average, 1½ tons per acre; worth \$3 50 to \$4 00 per ton.

ROOT CROPS.—Potatoes only are grown to any extent, and these much less than formerly. Many kinds are grown; the principal are, Neshanock, Baltimore Blue, Pink-eye, and a long, pale-red, rather watery variety, called Long Toms. This is a very prolific variety, and is raised mostly for stock. Average per acre 100 bushels. This year not more than one-fourth of a crop; worth 50 cents per bushel. Turnips, beets, carrots, parsnips, &c., are sometimes grown for food for stock, but generally only in small quantities for family use.

FRUIT.—Some attention is now being paid to fruit-growing. But few of the old orchards are grafted, but such as are, are of a superior quality, having been principally derived from the Putnams', at or near Marietta. Several nurseries have sprung up lately, where all the most approved varieties of fruits can be had at very reduced prices. Few apples are exported, except small quantities in a dried state. Present crop an almost total failure. Peaches succeed well, when the necessary care is taken to keep the worm from destroying the tree. Cherry trees thrive, and bear abundantly. Plums universally destroyed by the curculio.

SEEDS.—Clover and timothy seeds, as also flax seed, are exported to some extent, but the production per acre is so various as to render it difficult to fix an average. Clover is worth \$5.00 per bushel, timothy \$2.00, flax \$1.00.

DAIRY.—There are no regular dairies in the county, but large surpluses of butter are annually marketed by the farmers, at from 8 to 10 cents per pound.

PORK.—Pork is not extensively produced in this county; is worth \$3.50 to \$4.00 per hundred pounds.

HORSES AND MULES.—Our breeds of horses are good, and large numbers are yearly driven east; average price at 3 years old, \$60. Few if any mules in the county, but two jacks have been recently introduced for the purpose of breeding the article.

MINERALS.—Coal abounds in central and southern portions of the county; potter's clay and carbonate of lime are also abundant. No coal exported. A small trade in stone-ware is carried on by some three or four manufacturers. Coal is usually $6\frac{1}{2}$ cents per bushel, at Somerset. Stone ware, 4 cents per gallon; lime, $12\frac{1}{2}$ to $16\frac{3}{4}$ cents per bushel, at the kiln.

The officers of the Perry County Agricultural Society, are,

AARON JOHNSON, President.
EDWARD BREKIMMER, V. President.
DAVID REAM, Treasurer.
WM. J. CLARKE, Secretary.

JESSE THOMAS,
WM. M. BROWN,
WM. LOVE, Sr.,
JOSEPH G. WICKMAN,
JOHN BITCHET, } Managers.

Treasurer's Report.

David Ream, to Perry County Agricultural Society,	Dr.	
To funds in Treasury from last year.....	\$37 00	
To amount received from County Treasury ..	105 00	
To amount received from members.....	92 00	
	<u>\$234 00</u>	
	Cr.	
By amount paid on premiums.....	\$182 00	
By amount paid for printing.....	5 00	
By amount paid Secretary, for stationery, &c.....	5 00	
By amount paid for expenses of delegate to annual meeting of Ohio State Board of Agriculture.....		
		<u>192 00</u>
Balance in treasury.....	\$42 80	

PREMIUM WHEAT CROP.—FIRST PREMIUM.

Perry County, ss.

Jesse Thomas, being duly sworn, says that he has raised a crop of wheat the past season, upon the land surveyed by Peter M. Mullin, and that the quantity of grain raised thereon was forty-six bushels, measured in a sealed half bushel, and that he was assisted in harvesting and measuring said crop by Mark Thomas, and that the statement annexed, subscribed by this deponent, as to the manner of cultivation, expenses, &c., is in all respects true, to the best of his knowledge and belief, and that the sample of the grain exhibited is a fair average sample of the whole crop.

Statement of Cultivation, Expenses, &c., of the above Crop.

The land is a limestone soil; raised a crop of corn the year before sowing the above wheat; had about four loads of barn yard manure; was plowed some time in August from 6 to 8 inches deep; was harrowed twice over; was drilled in about the 18th or 20th of September, with Moore's drill; the rows north and south, with about one bushel of the white bluestem wheat to the acre. There is about 20 feet descent south in the 10 rods of the above acre. I weighed a sample of one bushel of the 46, which weighed 65 pounds, which would give me for the one acre 49 bushels and 50 pounds, by weight.

Expenses.

Plowing.....	\$1 00	
Harrowing.....	50	
Drilling.....	50	
Seed.....	50	
Cutting.....	1 25	
Hauling and threshing.....	1 50	
	<hr/>	
	\$5 25	
Forty-six bushels at 50 cents.....		\$23 00
Deduct expenses.....		5 25
		<hr/>
Total.....		\$17 75

My wheat crop, that which was drilled in north and south, was at least 25 per cent. better than that which was drilled east and west. The manure on the above acre was hauled out shortly before it was plowed under. Had no other dressing nor manure except from ordinary farm stock running in the field. This field I think had been in clover two or three years before the corn crop, which was raised on the field; then the wheat above followed in rotation.

JESSE THOMAS.

Sworn to before me this 22d day of September, A. D., 1851.

G. W. BINKLEY, J. P.

PICKAWAY COUNTY.

The Pickaway County Agricultural Society met in Circleville on Saturday, November —, and organized by appointing officers to manage the Society the ensuing year, to wit :

THOMAS HUSTON, President, of Circleville.
 NELSON FRANKLIN, V. Prest. “
 MAJOR BRIGHT, Treasurer, “
 P. K. HULL, Secretary, “

WM. W. ENTRIKIN, Kingston, Ross Co.,
 N. J. TURNER, Circleville,
 A. L. PERILL, Lithopolis,
 J. O. B. RENICK, S. Bloomfield,
 CYRUS REED, Williamsport, } Managers.

After the organization of the Board, a committee of three was appointed to draft a constitution for the government of the Society, to be reported at their next meeting, which was to be held on Saturday, the 6th of December ; which meeting was appointed in accordance with the meeting appointed by the State Board on the 19th. Consequently the Society has not adopted a constitution and by-laws.

On looking over the subscription list, I find between 300 and 400 dollars subscribed, which no doubt will be increased very considerably.

THOS. HUSTON, *President.*

PIKE COUNTY.

To the Ohio State Board of Agriculture :

The undersigned would represent that a Society known as “The Pike County Agricultural Society,” was formed and fully organized on the 3d day of March, A. D., 1851.

The number of members enrolled is 89, and the total subscription amounts to \$256, all of which has been paid in ; and agreeable to the provisions of the statute there was drawn from the county treasury the sum of \$54 79.

The county Fair, and award of premiums, took place on the second Friday in October, and the whole transaction was considered very creditable to those engaged, and far surpassed the general expectation.

The articles of stock, and domestic manufacture, were most flatteringly represented. Samples of grain, vegetables, dairy products, &c., were excellent.

Crops were not fully represented, there being none but those of corn and potatoes reported. There has been nothing peculiar in the manner of production or cultivation of any article exhibited.

The crops generally within the county have been a full average; there has been a failure of none, nor a great abundance of any.

We would give the following statement as an approximation to the average annual product per acre of the different crops, including in the estimate both bottom and uplands:

Corn.....	45 bushels.
Wheat.....	10 "
Oats.....	23 "
Potatoes.....	90 "
Hay.....	1½ tons.

There appears to be a growing interest felt in the success of the Society; and we entertain no doubt of its stability, and increasing prosperity.

During the last summer, in obedience to a call from the Board of Directors, W. W. MATHER, Esq., visited our county, and selected several specimens of soil for analysis, (the result of which has not come to hand,) for which service there was appropriated and paid over the sum of \$50.*

The following is an exhibit of the finances of the Society:

Amount paid in by members.....	\$256 00
Amount drawn from the county.....	54 79
	<hr/> \$310 79

Contra.

Amount paid out on premiums.....	\$188 50
Amount paid to W. W. Mather, for analysis of soils.....	50 00
Amount of expenses of delegate to the meeting of the State Board.....	12 00
Incidental expenses.....	4 62
	<hr/> \$255 12

Balance in the treasury.....	<hr/> \$55 67
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W. W. MATHER, *President.*

O. J. PHELPS, *Secretary.*

Piketon, Nov. 29, 1851.

* The results of the analyses of these soils may be found in detail in this volume, pages 155, 163. Remarks on these analyses, 164, 167, and on 172. Tabular statement of the results, for comparison, 170, 171. Remarks on the geological relations of these soils, 172, 173. Tabular statement of the results—materials available now, 202, 203. Tabular statement of the results, but more concisely stated, 204. W. W. M.

PORTAGE COUNTY.

PRINCIPAL CROPS.—Wheat, corn, oats, rye, barley, buckwheat, potatoes and hay.

WHEAT.—Average yield per acre of the present year is 20 bushels. The crop is most injured by winter-killing and rust; also by the drouth. Selling at 65 cts.

CORN.—This year the average is not more than 30 bushels per acre. One man however grew on one acre of ground, by measurement, one hundred and forty-eight and one-half bushels ears. Shelled two bushels of ears; weight when shelled, sixty pounds and 9 oz. Said ground has been occupied as a pasture for eight or nine years. Plowed up in April; plowed about 8 inches deep. Sand loam, with some gravel. Lay till near the 12th day of May, then thoroughly harrowed, and detained in planting said piece till the 20th and 21st; distance apart each way, $3\frac{1}{2}$ feet; 4 grains of corn in hill, except a small portion which he left from 4 to 6 grains in each hill, neglected to thin it, which was not as good; for which he received the premium at the County Fair. Selling at 40 cents per bushel.

OATS.—This year 35 to 40 bushels per acre. One cultivator grew 76 bushels of oats on one acre of land, 7 rods less, for which he received the premium at the County Fair. Selling at 25 cents per bushel.

RYE.—Average per acre about 15 bushels; but little raised.

BARLEY.—Average per acre about 20 bushels; but little raised in this section.

BUCKWHEAT.—Average per acre about 20 bushels; not much raised.

POTATOES.—Average per acre about 100 bushels; injured by the potato bug; not as much rot or decay this year as last.

HAY.—This year's crop is somewhat better than last; affected by the drouth and grasshoppers of last year. Average per acre, $1\frac{1}{2}$ tons.

FRUIT.—Excellent. The crop is very small this year. Much attention is paid to budding, grafting, and cultivating. I cannot say that fruit is an article of export.

BUTTER.—Cannot tell the amount; considerable quantity of butter exported; increasing slowly. All that I can say is, that a large quantity of butter has been for a few years bought up in this section by Mr. E. S. Keep, of New Orleans, for the southern market; also, Messrs. Butler & Reed, of Rootstown, in this county, have been for the last few years engaged somewhat extensively in the butter business.

CHEESE.—Two thousand tons of cheese have been exported from our county this year.

SHEEP AND WOOL.—I have no data on which to make up the amount of wool produced in this county. I can only state that it is one of the principal sources of income to our farmers. The quality on an average about medium; the price paid in Ravenna has been an average of 43 cents. There is no very great increase in the number of sheep kept, but an evident improvement is making in the character of the flocks. The number of sheep taken by the different township assessors in this county, amounts to 80,187; amount shorn from them is 168,561 pounds.

PORK.—The aggregate product I cannot state ; the value is from \$4 to \$5 per hundred ; the number of hogs in the county, 7,400 ; value, \$12,496.

HORSES.—The number is 6,175 ; value of same, \$271,863.

CATTLE.—The number is 28,578 ; value of same, \$333,292.

MULES.—The number is 9 ; value of same, \$375.

RAILROAD.—Amount of business between Cleveland and Ravenna : The business of that portion of the Cleveland and Pittsburgh Railroad between Cleveland and Ravenna, distance 38 miles, for six months, ending Sept. 20, 1851 :

Whole number of passengers 47,943 ; amount received.....	\$37,263 88
Amount of freight.....	22,058 83

The amount since the 20th of September will not vary much from the above.

MILLS.—Flouring 20, saw-mills 82 ; one extensive glass factory ; two furnaces in this county, one at Ravenna and one at Franklin Mills. The amount of business done by them I cannot tell, only in relation to the one at Ravenna. I was informed that it is doing to the amount of \$30,000 per year. The one at Franklin Mills, I have been informed, is doing an extensive business ; to what amount I am unable to say.

No escheated lands in our county.

Amount received into our county treasury from show licenses for the year ending January 1, 1852, \$120.

Concurrent with this we forward our treasurer's report, and a list of premiums awarded by our Society for 1851 ; also, a copy of an excellent speech, delivered at our last annual meeting, by the Hon. Eben Newton.

All of which is respectfully submitted through our delegate, Gen. McIntosh, to Hon. State Board of Agriculture.

Attest :

ALSON A. HARRIS,
Secretary of the Portage Co. Ag. Society.

Treasurer's Report.

To the Hon. Board of Government of Portage County Agricultural Society :

GENTLEMEN :—In compliance with the requirements of your constitution, the undersigned would respectfully submit the following, his sixth annual exhibit of the finances of your Society for the current year, ending September 2, 1851 :

Balance remaining in Treasury per settlement last year.....	\$88 37
Received from members current year to date.....	187 00
Received from county treasury.....	121 00
Total receipts.....	\$396 37
Amount expended for premiums and incidental expenses, &c.....	311 65
Balance remaining in Treasury, Sept. 2, 1851.....	\$84 82

It affords me great pleasure to be able to lay before you the following statement in regard to our Donation Fund.

Your Society, during the last two years, has raised \$1,047 45, which has been expended in building, fitting up, and improving grounds on which to hold our annual Fairs. The larger portion of the above sum has been raised by voluntary subscription, (for which we are greatly indebted to the efforts of our worthy President, Gen. McIntosh, and the enterprising individuals who assisted him,) the balance was appropriated by the Board, from moneys realized in the sale of Fair tickets.

Allow me to congratulate you on the future prospects of your Society. The books exhibited before you, show that we are *now* comparatively out of debt, with a Society composed of 385 members, and a fair prospect that the number will rapidly increase.

What member of your Society, or citizen of our county, can visit the Fair grounds, with its beautiful grove, well arranged buildings, and spacious Floral Hall, 200 feet in circumference, which has been completed the past season, and say the mite he has contributed for the fitting up of the same, will not divide a greater dividend in proportion to the amount invested, than any other stock. Will he not feel *himself* called upon to put forth *his* efforts to make our Society what every lover of the great science of Agriculture would desire to have it.

Your Society was organized in 1846, under very discouraging circumstances. A Society having run down but a short time before, which was organized previous to the passage of the act for the Encouragement of Agriculture, fears were entertained, and it was predicted by many friends of the new organization that this could not long be sustained. But how is it now, after a lapse of six years? Is there not an increasing interest throughout our county, and will not that which has been awakened in the last two years, if continued, place our Society in an enviable position among her sister societies?

Look at our facilities!—look at what the State Board is doing for us!—and say, enterprising, intelligent farmers of Portage, and gentlemen of the Board, whether or not *ours* shall be made a model society in Ohio.

All of which is respectfully submitted.

ENOS P. BRAINERD,

Treasurer of Portage Co. Agricultural Soc.

ADDRESS OF HON. EBEN NEWTON,

At the Portage County Agricultural Fair, October 2d, 1851.

MR. PRESIDENT, LADIES AND GENTLEMEN: I am somewhat embarrassed in appearing before you, having but a few days since addressed a neighboring society upon the same subject I am now called to address you. I then found it necessary to labor to discharge my duty to them, and myself, and I cannot now avoid repeating some things I then said, and perhaps in nearly the same language, for they needed the whole of my thoughts, and so do you, and they are not capacious enough to be entirely new. I will dedicate that feeble production to you, and consider it a part, not here to be repeated, but considered.

Agricultural Societies are the nurseries and schools for the science and practice of agriculture. There is no other agent so effective or efficient. They are the great store-house of nature and man combined to assist each other. Here nature places her animals, plants, shrubs, vegetables and flowers; and man, his attention to them, and improvement upon them, and they conjointly work and co-operate together to show the vegetable and plant from its germination to its greatest maturity and perfection; and also the animal from its birth to its highest improvement, in order that all may see the operation of the combined agencies in their greatest beauty. Here also is shown the operation of mind upon the materials of nature, in its greatest perfection, utility and beauty. Here, too, is the great market for mind and body to contemplate and enjoy. Here they can refer back to what the country was fifty years since, without farms, domestic animals, roads, buildings, implements of husbandry, and society and all its comforts; and contemplate it with farms extended and highly cultivated, ornamented with magnificent dwellings, orchards, fruits and flowers, surrounded with domestic animals of all varieties, improved and cultivated; connected and linked together by roads of the highest order and improvement, and society for the enjoyment of all these improvements and comforts.

America is the greatest agricultural country in the Universe; and Ohio among the best portions of it. These facts seem to be uncontroverted; if it be not so, the herds of cattle, horses, sheep and hogs that are taken yearly from our country, and wheat, and other grain raised, would satisfy all. More domestic animals are driven from this State than from any other State or Kingdom in the World, I will venture to say, without positive knowledge. This is evidence of our capacity and enterprize as an agriculturist, but it may not be of our most advantageous growth. If we in return are under the necessity of expending for manufactured articles, all our agricultural products, we may not be using our vast resources in the most advantageous manner. Any country rich in agricultural products and in mineral resources, and facilities for using them, should bring the agriculturist and manufacturer in close contiguity, in order that the products of the one may feed the laborers of the other.

There is probably no Nation in the world that has as little nationality in business as America. The whole world is her theatre of action; she deals with all the nations of the earth — she travels among all — she lives in all — she has products enough to feed all, and could clothe all, were her resources fully developed. If she could drive the best bargain with an Arab, an Hottentot, or Chinese, she would find him and deal with him as soon as with her own countrymen, for her sails whiten every sea, and the world bounds her enterprise.

Ohio is yet a new country. In about fifty years her vast agricultural products have been developed to their present condition. Within about the same period her two million people have been located over her occupied territory, and agriculture was the first great leading business. It is the first leading business of all nations and people. It is the first business a child learns, and the last business in which old age is employed. Food is the first want of the body — clothing is an incident to make it comfortable. The most natural business upon our territory is agriculture, and the people have as yet made it the leading business. As her products accumulated, she has made channels of communication upon which to transport it.

No government in the world, of the age of Ohio, can boast of as great facilities for international communication, by turnpikes, rivers improved, canals, railroads and plank roads. The important thoroughfares already made, and in course of construction, are furnishing and will furnish great facilities for transporting our products and fabrics. Cast your mind over the world, become informed of all the public improvements of other States and countries, and learn if the same number of miles, constructed in the same substantial manner, have been built for the same money.

When abroad, I inquired extensively as to the cost of their public improvements, and have no hesitation in saying they cost much more than ours. Pennsylvania, New York and Massachusetts are the only three States that bear any comparison to ours in number of miles, and in those States their expenses have far exceeded ours. In Pennsylvania, great confusion exists in their railroads. No continuous, uninterrupted route from the eastern cities to the west, through Pittsburgh, exists. In New York their roads have cost much more than ours. What has Ohio done? She has built a leading canal through her whole State, at less expense than the same distance has elsewhere been built. She has built a leading railroad through the State also, at less expense than any other line of the same extent abroad. She is now building a line from Cleveland to Wellsville, connecting the river and lakes, of over one hundred miles, for about two millions. I would ask the citizens of your county to point me to another road, of the same extent, built in the same length of time, through an agricultural country, for anything like the same money.

The State and Country are more indebted to the citizens of your county for this road, thus prosperously promising, by far, than to any other district. Let me here say, that this road, from its inception to its completion, in progress and general

financial management, will be regarded as a model road for a century to come; and it has already diverted the general travel from Cincinnati from its course, through your village. By these means your county is acquiring a prominence no where else in our country enjoyed. By it your products can be taken in a few hours to the lake or river, and in a few more to the city of New York. From these prominent examples of enterprise, skill and management, a new spirit and feeling must be given to agricultural pursuits, for examples are contagious, whether good or bad. Others are in progress of great importance. During the present year, I think America will have one-half of all the railroads in the world, and in all probability in six, more than all the world beside. In all the British Provinces, there is only twenty-two miles. In South America, thirty. In Spain only sixty. All the American improvements by railroads have been made since 1829. Plank roads, or the road of the farmer, is of but recent date. The first, I think, built in the world, was in 1836, in Canada, since which they have spread extensively in New York and Ohio. They are but limbs for railroads. They are confined to North America. While railroads add to the general wealth of a country, plank roads add to individual wealth where they pass. Between intermediate stations upon a railway, a plank road is preferable to the farmer, because he can take his produce upon it to the station. They are the most natural and simple road in the country, for our county. They are but an improvement upon our old causey (commonly called causeway,) and they were the best and most durable of any of our pioneer roads. I have traveled upon this class of roads over twenty years, that remained good, and are now. I know of no road for this level country, of the cost of this, as valuable for the farmer. It can be built by the farmers themselves, for from twelve to fifteen hundred dollars a mile. And I believe it would be as good an investment, by the rise of farms and facility for transporting produce, if not a dollar was paid in tolls, as most that are made. But these stocks are good, and among the best. All these chains of improvement are but so many channels to facilitate the farmer in disposing of his products and obtaining his fabrics, and they have been the means, and are becoming more so, of furnishing a ready market for all we have to spare.

This road, like others, should be made with skill, and in the most substantial manner; a track of thirty-five feet, or more, should be plowed up deep, and a bed made for the plank so low as not to be affected by the sun. The plank should not be over six inches wide; and a good pike made by the side of the plank.

Where is there a more desirable spot for the farmer on earth, than the Western Reserve, as a residence? If there is one, I have not discovered it. It is almost entirely surrounded by navigable waters and railroads, and interspersed in many directions by the same roads and all others. Possessing a soil and climate for health and fertility equal to any other, governed by laws equal to any other people, peopled by inhabitants for morality, intelligence and enterprise equal to any other in the same continuous extent, and possessing religious and civil liberty as broad as constitutions can devise and maintain.

All this has been acquired in a little over fifty years, and yet it is still comparatively new ; it has not more than reached its meridian. Your roads, colleges, schools and churches — your manufactories, farms, buildings, stock and implements of husbandry, are to be built, enlarged or improved. Your farms upon an average, now worth twenty dollars or more an acre, can and will be made worth fifty. Your fields, upon an average not now producing more than twenty-five bushels of grain to the acre, can be made to produce forty. Roads already made, and in progress, and in prospect, are much increasing the value of your farms, but other agents should and must be at work. Timber generally is fast becoming an important article, and should receive the attention of all farmers. In my address at Trumbull, I spoke at some length upon steam-mills, but the subject is so important I will enlarge, and repeat but little. Since that time I have conversed with the owners of some of our mills, (for we have four within three and a half miles of the center of Canfield,) and find their advantage and profit even more than I had stated. The mill at the center of Canfield was built five or six years since, and at more expense than those now built ; but it has more than paid all expenses, and for itself, and timber has not been very convenient. Another of these mills I induced some young men to build last spring. It cost between twelve and fourteen hundred dollars. It began business in May, and one of the owners informed me they had expended only fifty cents in repairs, and that the mill will defray all expenses and pay for itself this year, as they had been doing since they began. Another of these mills has been in operation nearly two years, and I would rather have its nett profits than any single farm in the township. The other was built this spring, and is doing an excellent business. All sorts of timber are used for sawing, of sufficient size, and they are sawing plank for plank roads, and boards for buildings, and improving buildings and fences, and I am in the confident hope that the saw dust will soon be used for manure. Timber has been so abundant heretofore, that but little attention has been paid to but few varieties, and the public mind has been mistaken as to the common varieties. Peperage is good timber for covering farm buildings and fences ; so are most all the other common varieties valuable for the same purpose ; and all varieties for many other uses. In each township in your county there ought to be at least two steam saw-mills, and they would be the most successful agents of wealth and economy that you can set at work. I commend my remarks in the Trumbull county proceedings, upon saw dust for manure, as worthy of adoption. Our fencing in this country will be done with boards and rails, and our attention should be turned to raising timber. I have in my fences about my house some forty or fifty locust posts of my own raising, from small plants put in the ground a little over twenty years since, and I have five or six hundred trees more now growing, that in a few years will be fit for posts. In the spring I expect to have two or three acres of evergreens and chestnut trees started. I dwelt at some length in my last address upon this subject, and you will soon see it.

The raising of evergreens, locust and chesnut, I consider of the first importance to all who have homes, and wish to make them valuable and ornamental. This business is extensively attended to in Europe, and it was to me the most pleasing sight connected with that country. It is certainly the object of every man to make his home and farm the most valuable, agreeable and profitable that he can, and this will add as much or more than any other means he can use.

Fruit is another important agent in this work. This is a fruit country, and the business has been good, and the demand is increasing as facilities increase to transport it. Our apples are in good demand in Europe, and will continue so; and they can be taken there more readily than they could to New York ten years ago. I saw very few apple or peach trees in that country; and in the eastern States this business is not as much attended to as formerly. I would recommend an increased attention to that subject. Stagnant water should be kept away from the roots of fruit trees, and straw or sawdust placed about the roots. The business of fruit will never be overdone in Ohio. The demand is increasing faster than the supply. Few men have followed it from year to year with that attention it deserves.

The value people place upon a farm depends very much upon the appearance it presents. If ten men were called to appraise two farms, in any neighborhood, of equal value, if in good order, but one is in fine order and the other out of order, with fences down, hog holes in the door-yard fence, boards off the barn, the manure scattered about the yards, sash and windows broken and out, paint worn off the house, tops of chimneys blown off, cellar door broken down, plaster falling upon their heads, brick burned out of fire place, and the children and family all out of order. The farm in order, to the ten men, would appear exceedingly valuable, their feelings imperceptibly operating upon the judgment, and thirty dollars an acre is fixed as the value. The farm out of order, to nine out of ten men, appears very inferior to the other, the feelings as imperceptibly influencing the judgment, and fifteen dollars is fixed as the value by the acre; whereas three hundred dollars would have placed the farm in as good order as the best.

This is human nature. This will be the judgment of men. The diminution in price, for want of order, is far greater than the amount necessary to put it in order. This seems to be a law of nature, to inflict a penalty for abusing her gifts, for she is always in order. He that abused the one talent had it taken from him and given to him that had ten. Let every farmer calmly reflect for fifteen minutes on the consequences of thus neglecting his farm; and first, the influences it has upon his children. The circumstances and situation of his family render it necessary to sell, and all these defects furnish so many objections in the mind of the buyer against the value of his farm. The farmer dies and his property is to be sold to pay his debts, or to be divided among his heirs. All these defects will be taken great advantage of under such circumstances. It is no excuse that they are too poor, or have no time to make improvement.

Hurrying over ten acres with the plow or scythe, instead of cultivating two well, and obtaining more wheat and grass, has consumed the time, and omitting an hour's work in time has made a month necessary. You may ask how I would increase the crop of grain from twenty-five bushels to forty. By deep plowing and manuring, and cultivating less, and keeping the water from standing upon the surface of the ground. Deep plowing is one of the most effective agencies in procuring a good crop. The opinion that nothing is soil but a few inches on the surface is a mistake. Any thing is soil upon which vegetables will grow. Take the earth from any distance below, and expose it to the sun, air and water, and it will grow vegetables. You make a virgin soil of it. Take a piece of land that has been plowed each year for ten, from four to six inches deep, receiving a crop of from 10 to 15 bushels, until it will not yield five, and plow it a foot deep, and have it so the water will not stand upon the surface, and put in grain in order, and you will receive a crop of 25 bushels. This process has been so thoroughly tried as to admit of no doubt.

In an incidental conversation last week, at Warren, with Almon Clark, of Mesopotamia, he informed me he had been in the habit of plowing shallow and receiving light crops, not more than 12 or 15 bushels of wheat an acre, and this year he plowed a piece of six acres a foot or more deep, and received thirty-seven and a half bushels an acre on the whole piece, and he thought he should forty, if he had been a little more particular in keeping the water from the roots of the grain. Plants must have room to reach down to search for food upon which to grow. Follow the plow with the subsoil plow; it is highly advantageous. Do something to keep the stagnant water from the surface of the ground; more crops and fruit trees are injured by that than any other cause.

In my remarks at Warren, I spoke at some length of manures, and I will not repeat it.

For this country, I am decidedly of the opinion that plowing in grain crops is the best mode; and of that I spoke at length. Straw scattered thinly over your meadows in the spring is an excellent method; it protects the land from cold winds and a hot sun. Cultivating too much land for meadow or plowing is bad husbandry—that is more than can be well prepared. This is so apparent, that it requires but little said. This I consider one of the greatest errors of the farmers of the Reserve. In this the Europeans excel us very much. No one is sensible of the amount of hay or vegetables that can be raised from an acre unless he has tried the experiment. There is no difficulty in growing from three to four tons of grass an acre. A very large amount of grain or roots can also be raised from an acre.

In Wales, the people are most remarkable for cultivating small quantities of land, and from it supporting their families.

The Europeans are much better economists than Americans generally. They save every thing, and take the best care of their domestic animals. Public buildings in your townships, encouraged, supported, and kept in good order, is another

means, among others, that has its influence to increase the value of your farms. Let a stranger pass through your township, and see your meeting houses and school houses, and other public buildings in good order, and he will form a high opinion of the thrift of your place, no matter what his views may be of religion or morality. If he should wish to buy, these things will have a great bearing with him.

Good stock, well cared for, has an important connection with the value of your farms. It brings people to your township and to your farms, and gives you an acquaintance and influence abroad; and if your attention is engaged about your stock, it will be about your farm, and both will be good.

We have as good horses, cattle, sheep, and hogs, in this country as in Europe. Their work horses in London, and in most of their cities, are very large and strong, larger than the largest class of Pennsylvania horses generally, and they consider them very valuable, worth two or three hundred dollars. We should not place any thing like such an estimate upon them. Their other horses are like ours. There is more attention paid to horses in this country than to any other animal. The people consider them more of a fancy article. They are more used than formerly, since farms and roads have become improved; and the general introduction of carriages has had a tendency to improve horses.

The sale of horses in Ohio, each year, amounts to a large sum of money. I saw at the Royal Races, at Ascot Heath, many of their best horses, and I did not consider them better than ours. Very much improvement can and will be made upon them, and in fact are constantly improving. Horses are kept in much better order than cattle.

It is not necessary to go to Europe for cattle; we have as good breeds in America as in any part of Europe. Our importers have spared no expense or pains in selecting good breeds, and they have been engaged in the business for many years. We have no importers in this part of the country, and it has been necessary for us to go to Virginia, Kentucky and Connecticut for good varieties; and it is yet necessary. The business of bringing cattle from those States has been increased for four or five years, and it has done an immense amount of good to the Reserve. Mr. Frederick Brown, of Hudson, has been engaged for some years in this business, and the country is much indebted to him for his exertions; he has been the means of scattering them over large portions of this country. At first he met with poor encouragement; but now, I am told, he meets with good encouragement and ready sale, at an increased price.

The call for these cattle has increased very much. The price has increased in Kentucky and Virginia. Good stock in England has also increased in price since agricultural societies have commenced operations. The price of good cows of their best breeds are from sixty to eighty dollars. Some ten years since, Norman C. Baldwin, of Cleveland, bought of Mr. Sullivant, of Columbus, a number of the best imported cattle at a high price, and brought them to Cleveland and Hudson, and met with poor sale indeed: he could scarcely sell at all at first, but they finally become scattered, and they have been a mine of wealth to the country, though a

heavy loss to him in the first instance, I have no doubt. Some of the cattle Mr. Baldwin placed in the hands of Deacon Kilbourn, of Hudson, on some terms, I do not know how. It was a long time before Mr. Kilbourn could sell to any advantage. I first introduced his cattle into our county, and gave him a start; and for some years before his death, he sold all he had to sell, and made considerable money from them. New modes of farming, and new cattle, horses, hogs or sheep, are hard to be introduced; but when once discovered to be useful will be generally adopted. It would be very difficult to fix the amount of money that has been brought to the township of Hudson, from the introduction of improved stock that a few men first brought there; but I will assure you it is very large indeed, and it has given that township a decided importance—not confined to cattle, for improvements are sympathetic and contagious, and have a general relation. Almost all the blooded cattle sold at the Fair in Warren last week, or at least all sold who wished. A single cow, of improved breed, brought into a neighborhood will soon add to the property of that neighborhood one thousand dollars. Eight or ten years since, I sold a Devonshire cow to Henry T. Kirtland for fifty dollars. I feel very sure he sold from that cow a thousand dollars in stock; and it has been extended more or less over the Reserve. This cow was brought by Mr. Baldwin, of Hudson, from Connecticut. I mention these things because they are results that have been produced by individuals with whom you are acquainted.

At Warren, I spoke at length of sheep and hogs, and would now say that we have as good breeds as can be found in England or elsewhere. We probably excel almost any other country in hogs and making pork; and it is an excellent business, as it will bear to take abroad. We can make pork of a better quality and cheaper than they can in Europe.

Since writing the above I have seen Mr. Anderson, the Secretary of the Ohio Importing Company, and he says they imported no animals but the best that could be found in Europe, and the most care has been taken to keep the breeds pure. I also conversed with some of the best importers in Kentucky, and they say that as good animals can be found in Ohio and Kentucky as can be in the world; and they also state that those Mr. Brown is bringing from Kentucky are as good as can be found in any country. I conversed with Mr. Baldwin in relation to the cattle he brought from the Scioto valley. He says he brought the best cow into Cleveland that was in the world, he has no doubt, and he could not sell her, and she died upon his hands. He says, the people of Hudson were almost ready to mob him for having sold Mr. Kilbourn a few head of those cattle at not more than half what they were worth, and that, in the end, were the means of saving him from embarrassment and placing him in easy circumstances. But to our credit these views and times have passed away, and the farmers from all parts of the Reserve are acquiring where they can get these imported animals to the best advantage; and I speak thus particular to give the desired information.

In order to make the business of farming fashionable, it is necessary that all classes should become its advocates and supporters. While it is more fashionable

to educate sons for the learned professions, as they are called, than for farmers or mechanics, the business will not flourish as it should. In England, and in Europe generally, the mechanic and agriculturist are upon a level, at least, with any of the learned professions. There the best and most skillful farmers and mechanics are the first men. In Belgium and Holland agriculture is the first business. At the the Palace, in Brussels, the Duke of Aremburg had in his best room, among his most valuable furniture, different varieties of corn in the ear, and he prized them higher than any thing he had. The King of Holland, sent Prince Albert his best cow, as a token of the highest regard, and the best I saw in that country, and the only one I considered as having any claim to any superiority to our best.

In England, there is a very general complaint of the low condition of agriculture. Opening their ports to the free admission of provisions has awakened a strong sensation, and all classes have rallied to its support and improvement. Even royalty is most forward, and the palace yard at Windsor has been dedicated to the show of animals. In many parts of England they are cutting down their shade trees to increase the amount of tillable land. They are doing it extensively in Devonshire, and in Surrey county, and in many other parts. But with all their exertions, I have no idea they can compete with us in the article of provisions. Their labor is lower than ours, it is true, but their rents and taxes are enormous, and brings their land very high. Our people are all exerting themselves in the great business of our country; all classes here, as there, are uniting. I will mention a single instance at Columbus. Dr. Thompson, who stands deservedly high in his profession, has invented a plough of great merit, and exhibited it at the Fair. He calls it Yankee Doodle with variations.

Every man, no matter what his profession or occupation is, should be acquainted with the habit, constitution and structure of animals, at least so far as to make good selections of different breeds, and those possessing good constitutions adapted to our soil, climate and business. If the animal is designed for milk, a knowledge of the characteristics that indicate that quality are almost indispensable. A mixture of Teeswater and Holderness is the best breed I am acquainted with for milk. This breed was brought to your county by Mr. Thorndike, (who is now deceased,) from Boston.

The recent Fair at Columbus was a proud one for Ohio. I have no doubt fifty thousand people were there assembled, and more property and greater variety than has been elsewhere exhibited on a similar occasion in America. Here all classes participated in its interests, and enjoyed its advantages, and appreciated its influence upon our country. Here all were proud to call themselves farmers, or artisans, or contributors to sustain its organization and extend its influence. Here was an opportunity for Ohio to call out her resources and develop her capacity as an agriculturist and artisan and permit her citizens to show their attachment to her great interests. Here was presented the horse in his greatest strength, majesty and beauty; the ox in his greatest perfection; the sheep and swine in their greatest

fertility and improvement ; the deer and elk domesticated and made subservient to man ; the fowl in all their variety, beauty and utility ; the vegetables and fruits of the earth, enlarged and extended in variety, beauty, and flavor ; the implements of the artizan and the discoveries of science to aid man in multiplying his means, and supplying his wants. The flowers of the field in all their beauty and variety, were anxiously contributing to cheer and animate the whole festival. The whole scale was sufficiently capacious to exhibit all our means, arranged in good taste and order, and well calculated to awaken an interest throughout the State and country. Very few of our people have an adequate knowledge of Ohio as a producing State, and I know of no means so well calculated to give that information as these societies, State and county.

Who can be found among the fifty thousand who visited that exhibition that has not seen or learned something new or useful, and thereby conceived the idea of advancing his own interest or improving his condition ? Not one. Who is not compensated for attending that or this ? Not one. How much money was spent in filling up the World's Fair, and yet how small a proportion it bears to the advantage conferred and information gained. Where does America stand, compared with what she was before, for skill and enterprise, among all the nations of the world ? I answer, at the head of all. Before unaccredited by all the most powerful, already has she made market for enough of her inventions and models to pay all expenses. But how small is this item compared with the stretch of thought that has thereby been awakened and called out, and yet to extend over every sea and every land, to enlighten the mind and develop the resources. What has it done to all other nations ? Brought them together, I answer ; and from being strangers and enemies, converted them into neighbors and friends, and showed each other what each has and wants, and opened markets and freighted channels before unused.

The scale of American agriculture, as well as most other business, is much larger than any other with which I am acquainted. Our country is large and productive in all the necessities of life, and abounding in mineral wealth, and manufacturing advantages and facilities. We make agriculture a general matter of commerce to a far greater extent than any other country. Our country is more various in its products than any other, producing all the varieties of grain, grass and fruit. Other countries are more or less dependent upon each other. Ours is equally various, and abounds in facilities for manufacturing as well as agriculture ; and when we adopt the same nationality as other countries do, we shall make and buy at home all we want to use.

I know of no reason why we do not buy all the iron, glass and hardware we use at home, instead of going abroad. If our practice in this particular was changed, it would enable our manufacturers to furnish these articles as advantageously as any country under heaven. But if they cost more at home, I know of no reason why they are not worth more, for the money paid for them returns immediately

to the pockets of those who use them, and they and the country are made richer by it. I know of no reason why the cotton, flax, and hemp we grow, is not manufactured at home into fabrics we wear and use, instead of being sent abroad to be manufactured, and again returned to us. If this habit was changed, (for I view it as a habit merely) how much additional labor could be advantageously employed; how many more mouths could be fed on your surplus products; and what a vast sum of money could you then have in addition to what you now have in circulation. Am I to be told that we have no materials for manufacturing these articles? I say no country has better. It is said we have no facilities for this business. I say if ourselves would do business with ourselves, no country could excel us. But it is said we have no mechanics skilled in the business. I say our mechanics can teach those of any other nation under the sun.

This practice should be changed, and the evil cured, and the people benefitted by it. Trace the history of our mechanics at home and abroad—a Franklin, Sherman, West, Burritt, and a host of others, who have laid the foundations of the government of the new world, and given laws to science in the old; whose enterprise has penetrated every sea and land, and their craft commands the oceans; and their models in all the arts are exciting and commanding the admiration of the world.

Instance the fleet of the Yacht; the speed of the steamship; the success of the reaper and plough; the award in the lock controversy; the family of India Rubber goods; Daguerreotype painting; music of the piano; the style and workmanship of carriages, and a multitude of others that can be called to mind, without enumeration. These things do not arise from any superiority by nature, but from stern necessity and hardship in the origin of our government, that command enterprise and sketch of thought, that called out all the energies of the mind and body, which resulted in the establishment of a wise government and liberal laws, spread over a vast and productive country. The general dissemination of information and equality among the masses has given full scope to the mind. In newspaper publication we excel any other people. The facility and ease with which a permanent title to real property is acquired, has done much to exert the mind and body, which is visible in all relations of life. Every tree, shrub, and flower we plant is our own. The implements of the husbandman and artizan, diffused over our country in their most approved and improved forms, and possessed by all, give us a decided advantage over any other country. Here you are surrounded with them, to give versatility and interest to this festival.

Your farms, gardens, fields, fruits and flowers—your shops and merchandize, all testify to their utility and employment. The fruit and vegetables with which I find myself surrounded—all the gifts of a bountiful Providence, in causing the vigilant hand to sow and plant, and the earth to yield in such variety, and profusion, and beauty, are but so many witnesses of the skill of man in the use of the gifts of Providence.

In the cultivation of a garden, more knowledge of the capacity of a small spot of earth to produce abundantly is gained than will be in any other way. It would seem that any one would be willing to cultivate a garden well, for it is the market of the household from May to December. Let any housekeeper open an account with his garden, and charge all his labor in preparing the ground and cultivating it, and give credit for all it will produce, at a price he would have to pay if he bought the articles, and a garden of half an acre will give a balance of forty dollars in favor of the garden. This may be regarded as extravagant by some, but I believe it literally true, and would so appear, if any one would take the trouble to test it. Take the garden in the fall, when it is dry, and put in manure and straw, and plough it deep, and it will be ready in the spring to work; and put in early such vegetables as the frost will not injure, such as lettuce, peas, cabbage, beets, parsnips, onions, and many others, and these will mature, so that you can put upon the same ground another crop that will mature sufficiently for many uses, such as early varieties of corn, turnips, and many others, and the amount you can get will astonish you. Take five or six leading articles alone, and see if you cannot make the amount. Say beets, carrots, potatoes, turnips and parsnips. We ought to take more pains to raise these roots for animals; they are very valuable upon a small scale. By cultivating your garden in this way, you become a skillful farmer of your whole plantation—you know what manure your soil requires—also the quality, and time, and manner of applying it. You learn what crops are most profitable; the time to put them into the ground; the time to gather them, and the amount of ground for a given article.

Every clergyman, doctor, lawyer and artisan should, for the sake of health alone, cultivate a garden; they all have the time, and should do it in order to learn how to appreciate manual labor upon the soil, in all its various and varied relations. They should do it as an example for others. They should do it, for by it they learn economy in time and money. They should do it, because it improves the mind. It is impossible to cultivate a garden well, without improving the mind. I would give more for the services of a clergyman, a doctor, or lawyer, who understands practically the science of gardening, than I would for four who never had the hoe or shovel in hand. They and all others should do it for its beauty and general utility. A good garden often sells a house or farm, or the animals upon it, and it is a recommendation for a professional man. A man in his garden is at home, in his office and his desk. A good garden is the first thing an inquirer for the man or his property sees. It is a recommendation for all he has and is.

Ladies, to you we are indebted for furnishing this feast—this festival. Your hands have adorned it, and your presence cheers and invigorates it. Your handiwork gives it variety, beauty, strength, and durability. The flowers which nature gives to adorn home, animate and cement relationship and friends, by you have been cultivated, plucked and placed to animate and adorn these domestic productions, and cement and perpetuate this relation.

They are your fit and appropriate agents. Flowers are nature's agents to adorn her productions ; well may you select them to adorn yours. They will not grow with sloth and indolence, nor with strife and controversy, but cultivation and competition add to their beauty. In all our further efforts at improvement in our industrial pursuits, may we have your aid and countenance—your skill and taste—and may our success thus far stimulate us with more zeal to magnify and improve our productions and elevate our species.

P R E B L E C O U N T Y :

BY D. LESH.

PRINCIPAL CROPS.—Wheat, corn, flax-seed, oats, rye, barley, hay and tobacco.

WHEAT.—The average yield of wheat in this county is 20 bushels. The total amount of wheat raised is 691,200 bushels ; value, at 50 cents per bushel, \$345,600. Marketed at Dayton, Middletown, Cincinnati, and the mills in the county.

CORN.—The average yield is 30 bushels ; this year 50 ; mostly the result of improvement in culture. Total amount of corn raised in the county this year, 1,728,000 bushels ; value, at 20 cents per bushel, \$345,600. Crop principally fed ; the surplus marketed mostly at the distilleries.

FLAX-SEED.—The average yield this year, 10 bushels per acre. Whole amount of seed raised, 103,680 bushels ; value, at 95 cents per bushel, \$98,496. Marketed at the oil mills in the county, and at Dayton and Cincinnati.

OATS.—Average yield this year, 35 bushels per acre. Raised mostly for home consumption. Whole amount produced, 302,400 bushels ; value, at 18 cents per bushel, \$54,432.

RYE AND BARLEY.—The former an unimportant crop in the county, though when raised generally produces well. The latter is becoming of more importance, and yields on an average about 40 bushels per acre. Raised this year about 12,000 bushels ; value, \$6,000. Rye, 4,000 bushels ; value, \$2,000.

HAY.—Average yield, 2 tons per acre. Whole amount produced, 20,736 tons ; value, \$103,680. None exported.

TOBACCO.—This article is being rapidly introduced into our county. This year's crop yielded well ; average about 1,350 pounds per acre. Whole amount raised, 540,000 pounds. None of this year's crop marketed yet. Value, at 8 cents per pound, \$43,200.

ROOT CROPS.—Potatoes are the only root crops raised to any extent. Average yield per acre, 150 bushels ; whole amount raised, 35,560 bushels ; value, \$10,668. The rot affected the crop but little this year ; remedy, early planting and digging as soon as done growing.

FRUIT.—Almost a total failure this year.

SEEDS.—Clover, average 2 bushels per acre; whole amount produced, 2,160 bushels; value, \$8,640. Timothy, 4 bushels per acre; whole amount, 3,456 bushels; value, \$4,520.

OTHER CROPS.—There are other crops of minor importance raised in the county, such as broom-corn, beans, &c., which we have no reliable data to go upon; but estimate the value of broom-corn at \$4,000.

DAIRY PRODUCTS.—There is but little cheese manufactured; not enough for home consumption; owing to the greater value of land for agricultural, than for grazing. Hence there is but little more stock kept upon the farms than just what can be fed upon the waste grass produced for fertilising. There is some attention paid to the manufacture of butter; the annual exportations amounting to from 300 to 350,000 pounds. Ordinary stock mostly used for milkers, though the short horned Durhams are being gradually introduced. The best in the county is a cross of short horned Durham and native.

SHEEP AND WOOL.—The aggregate amount of wool is about 49,000 pounds, mostly of mixed quality. Fine woolled sheep are being introduced; mixed breeds generally preferred.

PORK.—The county produces this year about 5,165,200 pounds of pork; value, \$232,434. Marketed at the various towns in the county, and at Dayton, Middletown, Hamilton and Cincinnati.

BEEF.—The number of beef cattle annually raised in the county is 3,450; value, \$10,360. Durham blood decidedly preferred.

HORSES.—Number of horses raised annually, 2,000; average value at 4 years old, \$65. Some improvement in stock; but few mules raised.

FARMING IMPLEMENTS.—There is a marked improvement in farming implements. Our farmers are beginning to see the superiority of good farming utensils, and to properly appreciate good farming. Quite a number of superior steel plows have been introduced within the last year or two, mostly of the celebrated Beard & Sinex plows, of Richmond, Ia. Sub-soil plows are also beginning to find their way into the county, and, judging by the past, we predict that in a few years we will have five to where there is one now. Several of McCormick's reapers have been introduced, but their utility has not, so far, been fully established.

IMPROVEMENTS.—Considerable is done in the way of improving the soil. Large tracts of wet land, that a few years ago produced nothing but grass, are now reclaimed by under-draining, and in a high state of cultivation, producing from 80 to 100 bushels of corn per acre. And this may be done, too, at the trifling expense of from 25 to 30 cents per rod. As a general thing, there is from 25 to 50 per cent more corn raised on the same amount of ground than there was ten years ago. There is likewise a material improvement in the culture of wheat. The principal obstacles to good crops, the fly and rust, are avoided by early sowing. Sowing as early as the 20th of August, and no later than the 10th of September, gives the

plant an opportunity of taking root and acquiring such a degree of hardness as will enable it to withstand the severe freezes and the heaving weather in the breaking up of winter, and be ready in the spring to re-commence growing and mature before the season of rust sets in. On the other hand, by thus giving it an early start, the fly will be unable to retard its growth enough to keep it in that tender state which all experienced farmers deprecate, because of its almost certainty of being winter killed; and this, late sowing undoubtedly gives the fly a fair opportunity of doing.

My own observation, and the experience of some of our oldest and best farmers, also go to show that in a season when the fly is bad, although late sowing may keep the fly out in the fall, they almost invariably get in, in the spring, and not unfrequently prevent its maturity; and the few heads that may seem to be maturing, are so enfeebled that they must necessarily be late, and in consequence are rust stricken and the crop blasted. The cause of wheat heaving out, our farmers seem to understand; and consequently, in putting out their crops, they provide against it by plowing the ground upon lands of a suitable width for draining off the surplus water, taking care that after sowing and harrowing is completed, all the furrows made in plowing the ground, and such other out lets and cross furrows as are necessary, are properly opened, in order that all the surplus water that may have collected may be immediately drawn off.

In hedging there is not much done; yet enough is done to fully establish its utility. Many of our farmers will have to resort to it, in a few years, or adopt some other more expensive mode of fencing. The Osage Orange variety is greatly preferred.

The law regulating public shows, &c., has been enforced, and \$38 collected for the agricultural fund.

Escheated lands, none.

Recapitulation.

The value of products of the soil raised in the county, is,

Wheat.....	\$345,600
Corn.....	345,600
Flax-seed.....	98,496
Oats.....	54,432
Rye.....	2,000
Barley.....	6,000
Hay.....	103,680
Tobacco.....	43,200
Potatoes.....	10,668
Clover.....	8,640
Timothy.....	4,520
Broom-corn.....	4,000
Total.....	<u>\$1,026,826</u>

*Report of the Preble County Agricultural Society.**To the Ohio State Board of Agriculture :*

The Society was organized on the 13th of April, 1850, and numbered the first year, 156. This year it numbers 200 members.

Its officers for the first year, were,

Dr. JESSE PARAMORE, President, New Paris.
JAMES DENISTON, V. President, Gratis.
GEO. D. HENDRICKS, Secretary, Eaton.
Dr. WM. H. H. B. MINOR, Treasurer, Eaton.

The officers for the present year, are,

ENOCH TAYLOR, President, Eaton.
NEWTON LARSH, V. President, Eaton.
Dr. WM. H. H. B. MINOR, Treasurer, Eaton.
DANIEL LESH, Secretary, Eaton.

J. B. STEPHENS, Eaton,	} Managers.
PETER SHIDLER, Eaton,	
JESSE STUBBS, West Elkton,	
JOHN GRAY, Fairhaven,	
J. F. IRELAND, New Paris,	

The Society held its second annual Fair on the 16th and 17th days of October. This Fair was admitted by all present to be a decided improvement over that of last year; the number of competitors being much larger, and the crowd of farmers and mechanics clearly indicated that they had caught sight of the age in which they live, and that the right spirit was abroad. The competition for premiums on field crops was more limited than could have been wished for, owing no doubt to the too great restrictions of the State Board, in requiring the affidavits of two disinterested persons to the statement of the competitor before he can compete for a premium.

Although but few lots of apples were offered, our county ordinarily produces an abundance of choice fruit, particularly apples.

Many of our farmers have abandoned altogether the cultivation of peaches, on account of their extreme liability to be frozen in the bud, or the danger of the tree being destroyed by a worm working between the bark and woody substance of the tree. For the former we have no general remedy; but the depredations of the latter may be mitigated, if not entirely prevented, by the application of tobacco stems or leaves to the stem and roots of the tree; and by examining, during the spring and fore part of the summer, and if any should have penetrated the bark, removing them immediately, which is readily done by boring after them with a common pocket knife. Care should be taken to injure the tree as little as possible in the process.

By reference to the following report of our Treasurer, it will be seen that the financial relation of our Society is in a flourishing condition. Taking all in all, it is manifest that our Society is permanently established. For its usefulness we have only to say, that the influence exerted has already produced a change in the agricultural relations of the county, and awakened a spirit of emulation that will not stop short of a final revolution in the agricultural affairs of the county.

ENOCH TAYLOR, *President.*

D. LEAH, *Secretary.*

Treasurer's Report.

Amount of funds held from last year.....	\$60 00
Amount received from members for 1851.....	96 00
From county funds.....	95 00
<hr/>	<hr/>
Total.....	\$251 90
Paid out for premiums, expenses, &c.....	105 45
<hr/>	<hr/>
Balance in Treasury.....	\$146 45
	<hr/>

W. H. H. B. MINOR, *Treasurer.*

The following is a list of the statements of competitors as to the manner of culture, &c.

WHEAT CROP.

To the Preble County Agricultural Society :

I hereby certify that I raised upon one acre of measured ground, on my farm, 3 miles south-east of Eaton, on the Franklin road, the past season, 28 bushels and 31 pounds of wheat, of the variety called the white bluestem, or Michigan wheat. The soil upon which the above wheat was raised, is a dark loam with a mellow sub-soil. The previous crop was flax. It was plowed deep about the 10th of August, harrowed once before sowing, and twice after sowing. Sowed about the 25th of August, with about one bushel and one-fourth of seed per acre.

Cost of Culture.

One bushel and one-fourth of seed.....	\$1 00
Plowing and harrowing ground, &c.....	2 00
Harvesting, threshing and marketing.....	4 50
Rent of land at four dollars per acre.....	4 00
<hr/>	<hr/>
Total.....	\$11 50
	<hr/>

By 28 bushels and 31 pounds of wheat, at 60 cents a bushel.....	\$17 10
From which deduct.....	11 50
Net profit of one acre.....	<u>\$5 60</u>

PETER SHIDELER.

CORN CROP—126½ BUSHELS PER ACRE.

To the Preble County Agricultural Society:

I hereby certify that I raised on one acre of measured ground, on my farm, two miles south-east of West Alexandria, on Twin Creek, 126 bushels and 28 pounds of yellow corn. The previous crop was clover, mowed and pastured off short. Previous to that the ground had been cropped a number of years without clover or manure. The soil and sub-soil were a black loam, being first bottom. The ground was plowed 8 inches deep in December last, and sub-soiled the same depth. Forty-one two horse loads of barn-yard manure were applied during the winter, and after the ground had been plowed. The ground was plowed the second time and harrowed the 25th of April. Planted the 26th of April. It was planted in drill rows, three and a half feet apart, the rows running north and south, the grains from 7 to 11 inches apart, one grain in a place; the ground rolled after planting; plowed one furrow in a row, to prevent moles from working, then harrowed once, plowed once, and cultivated four times.

Cost of Culture.

Plowing and sub-soiling.....	\$2 50
Stirring, harrowing and rolling.....	1 50
Furrowing and planting.....	1 00
Thinning and hoeing.....	1 50
Plaster of Paris, 3 pecks, and putting on.....	1 00
Plowing and cultivating.....	2 00
Hauling manure.....	4 00
Gathering and cribbing.....	2 50
Rent of ground.....	4 00
Total.....	<u>\$20 00</u>
By 126 bushels and 28 pounds of corn, at 25 cents per bushel.....	\$31 55
Deduct.....	20 00
Net profit of one acre.....	<u>\$11 55</u>

W. CAMPBELL.

CORN CROP — 120½ Bushels per acre.

To the Preble County Agricultural Society :

The ground upon which my corn was raised, was a piece of sward that was never known to have been plowed. I mowed off of the ground, for the last fifteen years, on an average, one ton and a half per acre. The ground was plowed and sub-soiled during the winter; it was plowed six inches deep on an average. I harrowed the ground twice, and plowed it again, in the latter part of April, from an inch to an inch and a half deep, for the purpose of getting sufficient loose dirt to cover my corn. I harrowed the ground twice, and then furrowed it off with stakes three feet four inches by two feet and a half. I planted on the sixth and seventh days of May, three grains in a hill. Cultivated it twice, harrowed it twice, and plowed it four times. I likewise put about ten bushels of bone ashes on said ground.

Cost of Culture.

Plowing and sub-soiling per acre.....	\$2 00
Cultivating and gathering the corn.....	7 50
Total.....	<u>\$9 50</u>
Cr.	
By 120 bushels and 27 pounds of corn at 25 cts a bushel.....	\$30 12
Deduct.....	<u>9 50</u>
Net profit on one acre of corn.....	<u>\$20 62</u>

ISAAC VANAUSDAL.

POTATO CROP.

To the Preble County Agricultural Society :

The ground upon which my potatoes grew was Twin bottom, at least one-half sand. The ground had been partially cleared, and this year the ground was cleared up, and planted with potatoes as the first crop. The potatoes were planted in rows about three feet apart, and were drilled in said rows about nine inches apart. The quantity of seed was about five bushels. The quantity of ground planted was one-fourth of an acre. The amount produced was forty-nine bushels and forty-six pounds. No manure was used on the ground. The first plowing was done with a bull-tongued plow, three furrows in a row. The second and last plowing was done with a single shovel plow, one furrow in a row.

Cost of Culture

First Plowing.....	\$0 37½
Harrowing and furrowing.....	20
Planting, two hands one day.....	1 50
Hoeing and weeding, two days.....	1 50
Digging, five hands one day.....	3 75
Total	\$7 32½

JAMES DENISTON.

N. B. In digging, on the fifteenth inst., I found that there were not many of the pinkeyes and early whites that had rotted in comparison to the copperheads, which were, perhaps, one-fourth or more rotted.

J. D.

BUTTER AND MILK STATEMENT:

To the Preble County Agricultural Society:

A statement of two test trials of milch cow Rose, by N. Larsh, during the months of June and August, 1851:

MILK IN LBS.		MILK IN LBS.	
June 13.....	48	August 20.....	32½
" 14.....	44	" 21.....	33
" 15.....	47½	" 22.....	34
" 16.....	45½	" 23.....	34½
" 17.....	48½	" 24.....	35½
" 18.....	48	" 25.....	35
" 19.....	48½	" 26.....	33½
" 20.....	44	" 27.....	32½
" 21.....	45	" 28.....	34½
" 22.....	45	" 29.....	33
Total	464	Total	336½
Butter.....	20½ lbs.	Butter.....	17½ lbs

The cow that gave this result is three-fourths blooded, one-half short horn, one-fourth long horn and Patton, one-fourth native. The food used during the above trials, as well as before and since, was nothing but common pasture grass. She was eight years old last spring; had a calf the 25th of April, and went to bull between the trials, (July 4), which, in some measure, accounts for the falling off in the milk from the first to the second trial. The daily difference, as the statement shows, was produced by the change in the weather, which all dairymen know, that have paid any attention to the matter.

NEWTON LARSH.

I hereby certify that I conducted the above trials of N. Lareh's red cow Rose and carefully weighed and marked the result of each day, as it occurred, and that the above is a correct statement of the number in pounds of milk and butter, as above stated.

October 15, 1851.

TEMPLE AYDELOTTE.

FLAX SEED CROP.—17½ Bushels per acre.

To the Preble County Agricultural Society:

I have, this year, raised a crop of flax seed, which I propose to offer for a premium. I have five acres and one hundred and forty-six rods, and found, on measurement, that I had 105 bushels and eight pounds. 1st. The ground was previously a clover sod, tended in corn last summer; manured last spring a small quantity on the thinnest places. 2d. A thin second bottom, almost level, a little inclined to the west. 3d. Manure none. The quantity of seed used was 48 pounds to the acre. 4th. The ground was broken up about the 5th or 6th of April, about 5 or 6 inches deep — harrowed before sowing, and brushed in. Sowed on the 11th day of April.

Number of days plowing, 3.....	\$3 75
Harrowing, 1½ days.....	1 87½
Brushing in, 1½ days.....	1 87½
4½ bushels of seed at \$1 12½ a bushel.....	5 06½
Cutting and threshing.....	11 00
Total.....	<u>\$23 56½</u>
By 105 bushels and 8 pounds at \$1 00 per bushel.....	\$105 15
Deduct.....	<u>23 56½</u>
Net gain.....	<u>\$81 58½</u>

VALENTINE SIMPSON.

CORN CROP — 124½ Bushels per Acre.

To the Preble County Agricultural Society:

I hereby certify that I raised on my father's farm, in Gratis township, two miles south-east of West Elkton, on five acres of measured ground, 621 bushels and 42 lbs. of yellow corn, making an average of 124 bushels and 19½ lbs. per acre. The ground on which my corn was raised was an old blue grass sod, which had not been plowed for the last 12 years, having been pastured during that time. The last crop of grain raised on said ground was oats, which was cut off in 1838. The

ground was plowed between the 1st and 15th of March, about 6 inches deep, with three horses. No manure was ever applied to said ground, except what dropped from stock, or the wash from barnyard. Harrowed over twice with the fallow harrow about the first of May. Furrowed off 3 feet 9 inches apart each way, and planted on the 5th of May. The corn was harrowed once, cultivated twice, and plowed twice.

<i>Cost of Culture.</i>	<i>Dr.</i>
To breaking ground, \$1 00 per acre.....	\$5 00
Harrowing before planting.....	1 50
Furrowing and planting.....	2 50
Harrowing, cultivating and plowing.....	6 00
Gathering and cribbing.....	10 00
Rent of ground at \$3 50 per acre.....	17 50
Total.....	<u>\$42 50</u>

	<i>Cr.</i>
By 621 bushels of corn at 25 cents per bushel.....	\$155 43½
From which deduct the cost.....	42 50
Leaves a net profit on 5 acres of.....	<u>\$112 93½</u>
Or a net profit per acre of.....	\$22 58½

And I further certify that there were 4 acres of said corn which yielded 129 bushels per acre, and the other acre, not being so good, reduced the average as above stated.

JOSEPH H. STUBBS.

TOBACCO CROPS.

To the Preble County Agricultural Society :

I do hereby certify that I have, this year, raised a crop of tobacco, one-fourth acre of which I propose offering for a premium. The ground upon which it grew was a brown soil with a yellow clay sub-soil; the previous crop was rye, and previous to that potatoes for a number of years. The ground was well manured before plowing for this crop; was plowed the first time about the first of October, 1850, and the second time about the first of April, 1851; was plowed and harrowed again the latter part of May. Furrowed off three and a half feet by three, and planted on slightly elevated hills from the first of June to the 20th of same month. It was cultivated in the ordinary manner, by plowing, hoeing, topping, suckering and worming; was cut when ripe and hung in the shed, with twine, for curing. The amount of tobacco by weight is five hundred and sixty-one pounds.

Cost of Culture.

Dr.

To plowing three times.....	\$1 00
Harrowing and fully preparing ground.....	1 25
Planting and plants.....	1 50
Plowing and hoeing.....	2 50
Topping, worming, &c.....	5 00
Cutting and hanging.....	1 50
Stripping.....	2 00
Total expenses.....	<u>\$14 75</u>

Cr.

By 561 pounds of tobacco at 8 cts. per pound.....	\$44 88
From which deduct expenses.....	14 75
Net profit.....	<u>\$30 13</u>

GEO. HARTER.

To the Preble County Agricultural Society:

This is to certify that I, this year, raised a crop of tobacco, one-fourth acre of which I propose offering for a premium. The ground upon which it grew is a black loam soil, on a yellow clay sub-soil; being a piece of ground which was formerly a wet slough, not adapted to anything but meadow grass. The ground was reclaimed in the spring of 1850, by under-draining. The previous crop was corn, and previous to that there had not been any crop, except hay, for a number of years. In this crop there was no manure applied. The ground was plowed the first time about the third day of April, and the second time about the 23d day of May; was harrowed well after the second plowing. Furrowed off three feet apart each way, and planted on slightly elevated hills on the 31st of May and 2d of June, of plants produced in a hot bed, of the Ohio seed leaf variety. The crop was cultivated in the usual manner, plowing, hoeing, topping, worming and suckering. The actual yield by weight in the hand was five hundred and eleven pounds.

Cost of Culture.

Dr.

To plowing and preparing ground.....	\$1 00
Hilling, planting and plants.....	1 75
Plowing twice and hoeing three times.....	1 50
Topping, suckering and worming.....	4 50
Cutting and hanging.....	1 50
Stripping and marketing.....	2 50
Rent of ground.....	1 50
Total expenses.....	<u>\$14 25</u>

Ca.

By 511 pounds of tobacco at 8 cents per pound.....	\$40 88
From which deduct expenses.....	14 25
Leaves a net profit of.....	<u>\$26 63</u>

DANIEL LESH.

There were two more crops of corn entered, but without the necessary requisites, consequently they drew no premiums, but are worthy of notice in this place. The first was that of A. B. McKee, of Jefferson township, who raised, on five acres of ground, 551 bushels and six pounds; being 110 bushels $12\frac{3}{4}$ pounds per acre. The other was Mr. A. Campbell, of Jackson township, who measured from one acre of ground 126 bushels and 39 pounds of corn. The board voted each of them a copy of the Ohio Agriculturist, as a manifestation of their respect for good farming.

RICHLAND COUNTY.

BY JAMES E. COX.

1. **PRINCIPAL CROPS.**—Wheat, Oats, Corn, Rye, Flax, Clover and Timothy Seeds, Hay, &c.

2. **WHEAT**—During the last year in this county, was excellent, being an average yield of at least 20 bushels to the acre. Land well clovered and fallowed produces the best.

3. **OATS.**—About an average yield, say 30 to 40 bushels per acre.

4. **CORN.**—Injured considerably by the drouth and grub worm, but crop good quality; average per acre 45 bushels. Price, 40 cents per bushel.

GRASS AND HAY.—Timothy considered best for hay, and red clover yields the greatest amount of pasture. Average, two tons of hay per acre. Price, \$5 00 per ton.

6. **POTATOES.**—Generally good, but for the last four or five years have suffered very much from the rot; this year scarce, and sell for 75 cents per bushel.

FRUIT.—We have a choice variety of apples, peaches, and almost every other fruit, but during the present year nearly all killed by early frosts or during winter.

7. **SHEEP AND WOOL.**—For the last few years great attention has been paid to wool growing, and during the past year probably not less than 300,000 lbs. have been sold; and we have some of the best bucks in the State.

8. HORSES AND CATTLE.—Our horses will compare favorably with those of any county in the State. 500 are sold yearly, and the last year prices have ranged from \$70 to \$125 each.

Cattle are not as much raised in this county as horses, yet many are sold, and of late years much attention has been paid to improve the stock. An immense quantity of butter is sold every year, but little cheese is made.

Hogs.—Of late much attention has been paid to improve the stock of hogs. Berkshire and China, mixed, are considered best in this county.

Report of the Agricultural Society.

About two years ago the first society was formed in this county. We have now 263 members. One hundred and eighty-seven have paid this year, and we have received \$154 38 from the county treasury.

The following is the report of the committee on farms, viz :

To the Richland County Agricultural Society:

The undersigned, two members of the committee appointed to examine farms presented to the Society at its second Fair, October 10, 1851, in competition for premiums, beg leave to tender the following as their report, regretting much that they were deprived of the company of one esteemed member of the committee, on whose scientific and enlarged knowledge, practical experience in agriculture, and good judgment and taste in farm improvements, they had relied for direction and discrimination in their duties.

The committee have examined, with care, the nine farms respectively belonging to and worked by the following gentlemen :

John Young and John Hamilton, Jefferson township ; Mathew Boner and Jacob Palm, Washington township ; John Logan and Benjamin Willett, Springfield township ; John H. Culbertson, Madison township ; Harvey Noble, Cass township ; Francis Ashton, Franklin township.

To describe which, in detail, as to soil, water, timber, shade and ornamental trees, roads, lanes, improvements, manner of cultivating, and products, would swell a report to a great length. They have, therefore, deemed it proper to adopt a more brief form, and leave unsaid many things which, if space would permit, would be both proper and interesting.

The farms of Messrs. Young, Hamilton, Palm, Boner, Culbertson, Logan, Willett and Noble, are distinguished by superior quality of soil, beauty of situation and topography, convenience and economy of arrangement, excellence and abundance of fruit, superiority of dwellings, barns and out-houses, and plans for same, and above all by the distinctly marked evidence of the owners' industry, their agricultural neatness, their manly and commendable pride in household enjoyments, their humane devotion to the comfort and health of their stock, in short, of their

sensible, practical labors, and their wise attention to the scientific improvements and suggestions of the age. If there were no better farms in our county than these eight, on which the gentlemen named are enjoying rewards of their labor, in the temporal comforts and christianizing influences of the farmer's life, we should not fear comparison with most counties of the State.

Messrs. Hamilton, Palm, Culbertson, Boner, Noble and Ashton, each report their last season's crop of wheat to be an average of 30 bushels to the acre; while Mr. Hamilton, from one measured acre, had 44 bushels. This season Mr. H. is experimenting with lime, having spread in one field, after the appearance of the wheat, 6 bushels on one acre, and 12 bushels on another acre, leaving the other part of the same field without lime. This gentleman produced, last season, 107 bushels of corn from one measured acre; certificate of which fact was lost by the officers of the recent fair. But this large yield was not equal to Mr. Boner's production, he having 120 bushels from one acre. Several of the gentlemen named use the drill with approbation, and commend its use to others. The blue stem wheat seems to be the favorite of all.

The farm of Mr. Ashton, the committee have thought proper to describe more particularly than the others. It contains 260 acres, lying six miles from Mansfield east of north, 180 acres of which, laid off in fields of 6 to 25 acres, are under cultivation. The soil is of superior quality, about one-fourth part being light black loam bottom, to which sugar and black walnut timber are natural, the residue rolling land, originally characterized by white oak, hickory, and black walnut timber; together adapted to the production of wheat, clover, corn and timothy. In the fences there is perfect uniformity, all being made of nine rails, staked and double riders; bars all alike made of sawed plank; large gates of good structure, in good repair, and with perfect fastenings. In our thorough examination of the premises, not a rail or stake of the numerous fences was found out of place; and not a bush, sprout, or briar, could be found on the farm, except a sweet briar which was left for cultivation. Mr. Ashton adopts the plan of covering all his cultivated fields with clover; sowing about one bushel of seed to 7 acres, as the best quantity. His wheat fields give evidence of his skill, in straightness of work with the drill, and of his wisdom in fully pulverizing the land. He uses the drill with success, and speaks highly, and reasons philosophically of its merits. He also uses the cultivator and the double shovel plow in raising corn, by which he obtains an average crop of 70 bushels per acre. His wheat, the past two seasons, averaged 30 bushels to the acre; his whole crop being 1,760 bushels in 1850, and about 1,200 bushels in 1851. He mows 25 acres of meadow, getting two tons of hay to the acre. His farm house is well built, and finished in good taste and with every convenience, and furnished in superior style for a country mansion; the most commendable ornament (though not the most expensive piece of furniture) being a good *library* of religious, historical and scientific reading. He has two frame barns of medium size, with stone basement, each finished with every convenience to him-

self and comfort to his stock. In one barn is a large room (about 40 by 14 feet) used exclusively for storing his family carriage, and his great variety and supply of farming tools, all of which are cleaned off before put up, and left as smooth and bright as when taken from the factory or store. In short, he has a place for everything, and everything is in its place, both in and out of doors.

Without hesitation, the committee award the first premium to Mr. Ashton's model farm, and commend him as a practical agriculturist to the emulation of others.

There are some doubts in the minds of the committee about the bestowal of the second premium. Either Mr. Benjamin Willett or Mr. J. H. Culbertson is entitled to it. Were the improvements, now begun and projected by Mr. Culbertson, all completed, there could be no hesitation in awarding it to him, as his farm and improvements would then be not inferior to any in the county; but the comparison of completeness being in favor of Mr. Willett, they think it their duty to award to him the second premium, and to Mr. Culbertson a well deserved diploma.

HUGH GAMBLE, }
BENJ. JACKSON. } *Committee.*

November 26, 1851.

The Society proceeded to the election of officers for the ensuing year; the following ticket was nominated and elected, to wit:

MORDECAI BARTLEY, President, Madison township.	
R. D. NORTH, Plymouth township,	} Vice Presidents.
ELI WILSON, Sharon do.,	
ISAAC OSBORNE, Franklin do.,	
WM. DARLING, Worth'ton do.,	
JOHN MARKET, Jefferson do.,	
JAMES E. COX, Rec. Secretary, Madison township.	
WM. LYNNE, Cor. Secretary, Jefferson do.,	
G. W. WARING, Treasurer, Madison	

M. MOODY, Jefferson township,	} Executive Comm ee.
J. COOK, Madison do.,	
I. HERRICK, Peity do.,	
J. W. STRONG, Jefferson do.,	
J. SMILEY, Sharon do.,	
H. PETTINGER, Frank. do.,	
B. JACKSON, Jefferson do.,	
A. C. WELSH, Spring. do.,	
C. T. SHERMAN, Mad'n do.,	

The foregoing reports and proceedings close the business of the society for the year 1851. The officers take this occasion to say that the fair has exceeded their expectations; and to hope it may have so interested the public as to induce an exhibition next year that will compare favorably with the fairs of much older States.

JOHN YOUNG *President.*

Attest, FRED. COOK, *Secretary pro tem.*

Richland County Ag. Soc. in account with Geo. W. Waring, Treas. for 1851.

	Dr.
October 10, 1851, To cash received of J. Moore, Treas. for 1850----	\$106 00
“ “ Cash received from members for 1851-----	187 00
“ “ Cash of Richland county-----	154 38
Total -----	<u>\$447 38</u>

	Cr.
October, By am't pd bill for expenses, by order of Pres.----	\$58 90
“ “ Cash paid for Diplomas-----	16 00
“ “ Cash pd Premiums, by order of President-----	281 50
	<u>356 40</u>
Amount in my hands-----	<u>\$90 98</u>

GEO. W. WARING, *Treasurer.*

MANSFIELD, Nov. 29, 1851.

ROSS COUNTY.

To the President and Directors of the Ohio State Board of Agriculture:

GENTLEMEN: Nothing has come to our knowledge, from information or observation, which requires us to change or add to the answers given to your interrogatories, as published in the “Ohio Agricultural Report of 1850.” The variety and amount of productions of our soil remain about the same as heretofore described.

It gives us unfeigned pleasure to say, that our last county fair was, perhaps, the most interesting which had been witnessed here for many years. The county which has excelled Ross, in the present year's exhibition, will be truly worthy of praise and congratulation. Our thorough bred Durhams were splendid specimens of their kind; the full blood and grades also elicited the admiration and approval of bystanders and judges. Many were forcibly reminded of those days when the old Importing Company exhibited their stock to that public, which considered their weight and cost as equally incredible. The increase in the number, and the improvement in the quality, of the horses exhibited this year was a matter of agreeable surprise. Hitherto our show, in this line, has been very deficient. To the farmers, there is now reason to hope that there is “a good time coming.” There were several fine, or rather heavy, draft horses. The cross of Eaton's Sampson and the blooded mare give promise of making a valuable animal for the wagon and the plow. Horses corresponding to the English cock-tails, or three-quarter bloods, are by no means common here, but such as were shown evince all the

traits of action and durability requisite for the harness or saddle. We can hardly refrain from speaking in a spirit of pride of one change which has taken place since our last report. It is of the introduction, use and approbation of new and valuable agricultural implements, plows, harrows, rollers, threshing machines, and "last, but not least," horse power reapers. These last have more than satisfied their importers. The owners believe they will very soon be paid for their purchase, by the expedition and saving in their work.

Knowing, as we do, that our mechanics are more wanting in will than ability, we exceedingly regret that they have not more generally contributed to our display by the works of their hands.

In the ladies department, where we had a right to look for the highest pleasure and interest, we were greatly disappointed. They seemed to have prepared few things specially for the occasion, but their smiles. These, like summer showers are very good and acceptable, but the ground should first be prepared for them. There were a few honorable and praise-worthy exceptions to the rule. We hope the rule itself will be prevalent in future.

Respectfully yours, &c.,

JAMES VAUSE,

President Ross County Ag. Soc.

The Ross County Agricultural Society was organized August 26, 1846, by the election of the following officers :

1846 { W. MARSHALL ANDERSON, President, Chillicothe.
ALEX. RENICK, Vice President, do.
WM. H. DOUGLASS, Treasurer, do.
R. W. BURBRIDGE, Secretary, do.

1847 { JAMES VAUSE, President, Chillicothe.
A. PEARSON, V. Pres. do.
G. W. RENICK, Treasurer, do.
S. W. ELY, Secretary, do.

1848 { JOHN MADEIRA, President, Chillicothe.
ALEX. RENICK, V. Pres't, do.
G. W. RENICK, Treasurer, do.
S. W. ELY, Secretary, do.

1849 { SIMPSON JONES, President, Chillicothe.
J. H. DAVIS, V. Pres't, do.
G. W. WORKMAN, Treasurer, do.
R. H. LANSING, Secretary, do.

1850 { JAMES VAUSE, President, Chillicothe.
W. M. ANDERSON, V. P., do.
G. W. WORKMAN, Treas'r do.
R. H. LANSING, Secretary, do.

1851.—Same officers and same address.

To the President and Directors of the Ross Co. Ag. Soc.:

GENTLEMEN: The paying members of our society, for the last year, is ninety-six.

R. H. LANSING, *Secretary*.

To the President and Directors of the Ross Co. Ag. Soc.:

Moneys collected from members and paid by county treasurer.....	\$467 90
Cash borrowed to meet expenses incurred.....	175 00
	<hr/>
	642 90
Moneys out for purchase of plate and other expenses of society.....	607 58
	<hr/>
	\$35 31
	<hr/>
Plate on hand.....	\$203 00
	<hr/>

GEO. W. WORKMAN, *Treasurer*.

December 1, 1851.

SCIOTO COUNTY.

PORTSMOUTH, Nov., 1851.

State Board of Agriculture:

GENTLEMEN:—The Scioto Agricultural Society was organized February 22d, 1851, with 102 members.

The officers of the Society were,

L. MOSS, President.
G. W. HERED, V. President.
WM. B. RUSSELL, Secretary.
THOS. DUGAN, Treasurer.

W. D. McDONALD,	} Managers.
JOSEPH MOORE,	
AARON NOEL,	
ISAAC V. CUNNINGHAM,	
WM. A. MARSH,	

The first Fair of the Society was held in Portsmouth, September 20th, 1851. The attendance was large, and a very general interest manifested among our citizens in the prosperity of the Society. The directors were much gratified with the success attending this, their first effort, their expectations having been far more

than realized. The show of horses, cattle and hogs was large and respectable, evidencing great improvement in each class of animals.

The agricultural implements exhibited were of a superior order, and excited general attention.

Among the manufactured goods were many articles that would successfully compete with any other. This was particularly the case with the woollen manufactures, boots, hats, articles in iron, &c.

Premiums were awarded by the different committees.

After the announcement of the premiums awarded by the different committees, the President introduced to the assemblage BENJAMIN RAMSEY, Esq., who proceeded to deliver an excellent address on the importance of improving the agricultural interests of the county.

The officers of the Society for the ensuing year are.

L. MOSS, President:
JOHN D. TREAT, V. President.
THOS. DUGAN, Treasurer.
WM. B. RUSSELL, Secretary.

JOHN A. TURLEY,	} Managers.
JAMES O. JOHNSON,	
SEYMOUR PIXLEY,	
WM. D. McDONALD,	
AARON NOEL,	

In addition to the foregoing report of the first annual Fair of the Scioto County Agricultural Society, it may be proper to remark, that owing to necessary embarrassments in the way of collecting together and making a full and satisfactory report of all our agricultural, mechanical and mineral resources, it is thought proper to postpone our exhibit of the incomplete statistics of the several resources and pursuits, until our next report, when it is hoped that a more complete and satisfactory report will be presented.

In conclusion, I would say, that we have a soil as various as any in the State; from the very richest to the very poorest, and capable of producing all the grains and all the grasses for the sustenance of man and beast; and fruits from the choicest peach to the delicious grape. Our mineral wealth will compare favorably with many of the counties in the State, and our citizens are anxious to improve them.

Yours,

LEMUEL MOSS, *President.*

Treasurer's Report.

The amount received since the organization of the Scioto Agricultural Society, in February last, by the Treasurer, from private subscriptions and county Treasurer.....		\$233 50
The amount disbursed, viz:		
For contingent expenses.....	\$14 62	
For premiums awarded.....	87 25	
		<hr/> 101 87
Balance in Treasury.....		<hr/> <hr/> \$131 63

THOS. DUGAN,

Treasurer Scioto County Agricultural Soc.

Portsmouth, Dec. 1, 1851.

No escheated lands.

Due to the State Board for shows, \$26 12½.

SENECA COUNTY.

BY G. SPRAGUE.

PRINCIPAL CROPS.—Wheat, corn, oats, hay, potatoes and fruit.

WHEAT.—Average per acre, 20 bushels. Many farmers, by proper tillage, produce 35 bushels, and in a few instances 45. The white bluestem is the variety most sought after here. A considerable portion of this county is rather flat in surface, with a very rich clayey loam soil, well adapted to grass. The principal portion of the county, however, is rolling, with a productive soil, capable of great increase upon the present yield of crops, by a more careful system of tillage. Our sub-soil being generally a firm clay, almost impervious to water, greatly needs the general use of the sub-soil-plow. A large amount of wheat is annually winter-killed, from too shallow plowing, thereby confining the excess of water upon the surface, which by continued soaking of the tender shoots, freezing and thawing, rarely fail to dot our fields with sickly, barren spots, the loss on which alone would annually pay the cost of a sub-soil plow, and the additional labor of using the same, to say nothing of the increase of crops on the entire surface, from a thorough loosing up of the soil.

CORN.—Average yield, 40 bushels. Our soil is capable of producing an average of 60 bushels, with deeper plowing, and cultivation conducted with more care. Many farmers produce from 70 to 80 bushels.

OATS.—Average, 40 bushels.

BARLEY AND RYE.—But little grown.

GRASS AND HAY.—Grass and hay grow luxuriant in this county. An increase of stock is much needed among our farmers, to give more certain annual increase. The wheat market is variable, and many farmers, depending entirely upon this crop, not unfrequently feel the need of other sources of cash income. One of the best means of meeting this very common source of embarrassment, would be the increase of stock, both in amount and quality, in this county, and throughout this portion of Ohio.

ROOT CROPS.—But little attention paid to crops of this kind, except potatoes. This crop has suffered to a considerable extent with the rot.

FRUIT.—Is produced in considerable quantities; attention mostly confined to apples and peaches. Great room for improvement in the general quality of our fruit, much of the ground occupied for that purpose being encumbered with inferior varieties. We anticipate from our county Fairs, a healthy stimulus to fruit growing, and a great improvement in the general quality of the various kinds.

SEEDS.—Not much attention paid to raising crops under this head, for export.

BUTTER.—In considerable quantities, is annually exported from this county, tho' a great increase of this product ought to be yielded in this region of Ohio, and the latter remark will apply also to cheese, of which but little is made. Our cows are mostly native, and the majority are inferior milkers, and worse for stock and beef.

SHEEP AND WOOL.—The remarks under the last head will not apply here. It is becoming quite common with our farmers to grow wool which will sell readily for 40 cents, and some is held at a higher figure. Many of our farmers have good sized flocks, the product of the best importations, and direct importations have been added the present year.

PORK.—Considerable quantities of hogs of the common breeds, are annually fatted in this county, for export. For the years 1850-51, but little exported.

BEEF.—No attention paid to packing beef for export.

HORSES AND MULES.—No mules raised in the county. Not much attention paid to improving the breeds of horses. A considerable number are exported annually, which are bought up at prices varying from \$65 to \$90.

IMPLEMENTS.—Some interest beginning to be manifested in improved implements. Reapers, wheat drills, improved plows, &c., are gradually coming into use.

OTHER IMPROVEMENTS.—No special report demanded under this head. Since the organization of our county Society, there is a manifest improvement in the interest which farmers and others take, in the general improvement and encouragement of agricultural pursuits. This healthy impetus will result in improved tillage, the introduction of better stock, and more attention to the profits and pleasures of horticulture and rural taste.

*Report of the Treasurer of the Seneca Co. Ag. Soc., for 1851.***A. LUGENBEEL, Treasurer.**

	Dr.
To amount from organization of 1842.....	\$18 00
To amount received of 207 members of 1851.....	207 00
To amount received from County Treasurer.....	135 55
To amount received of J. O. Huffman, rent of ground for refreshments	19 00
	<hr/> \$379 55

	Cr.
Paid G. Sprague, Sec'y, to defray premiums.....	\$174 50
For printing, night-watch at Fair, &c., &c.....	13 61
	<hr/> 188 11
Balance in Treasury.....	<hr/> <hr/> \$191 44

A. LUGENBEEL, Treasurer.**SHELBY COUNTY.**

At a meeting of the citizens of the county, at the court house, in Sidney, on the 19th of April, 1851, the Shelby County Agricultural Society was formed, a constitution adopted, and the following officers elected :

IRWIN NUTT, President.
 HARDESTY WALKER, V. President.
 JOHN P. HAGGOT, Secretary.
 THOS. STEPHENSON, Treasurer.

JOHN BACKALAW,	} Managers.
ISAAC T. FULTON,	
LUKE FISH,	
HUGH McELROY,	
DANIEL VANDEMARK,	

The Society commenced with the general good wishes of the citizens of the county; and the officers entertain high hopes of accomplishing much good in this community, where in times past but little regard has in general been given to the improved methods of agriculture.

The first Fair was held in Sidney, on Wednesday the 15th of October. It was well attended, and gave the most cheering promise of a successful future. Premiums were offered and awarded, lists of which are forwarded herewith.

In the brief space which has elapsed since the formation of our Society, with the inexperience of its members, we have not obtained those accurate statistical facts requisite to a report in detail, and will at this time make only a few general remarks.

Our principal crops are, wheat, corn, oats, rye, barley, flax-seed, potatoes, hay and grass.

The soil of the county is well adapted to the production of all these crops in great perfection. For the great staple of wheat, the soil is peculiarly adapted, and it is here raised in as great perfection, by a few of our farmers, as in any other section of the State. The same remark is true also in reference to many other crops, especially to oats. For the last two years the average crop of wheat, per acre, is estimated at 22 bushels. The price is now 50 cents per bushel. The general average of oats is about 30 bushels. With a little improvement in the mode of cultivation, both these crops may be greatly increased. Thirty-six to forty-two bushels of wheat, and from eighty-three to eighty-eight bushels of oats per acre, have often been produced by our best farmers.

FRUIT.—This is cultivated by many in great perfection. Apples, equal in all respects to any we have ever seen, are raised by many, and the improvement is rapidly extending over the county. Peaches, pears, quinces, plums, grapes, &c., are cultivated with success, and produced of excellent quality.

BUTTER AND CHEESE.—Are produced for home consumption, and a very large amount of butter is exported.

PORK.—A considerable surplus is produced. It is worth, this year, \$4 per 100 pounds.

HORSES, MULES AND CATTLE.—Considerable attention has lately been given to raising these for market.

SHEEP.—We have some first-rate improved flocks in the county, and several intelligent farmers are giving considerable attention to growing wool of the finer varieties. Wool is now really one of our heaviest staple articles of export.

LIMESTONE.—This abounds in the county, but is only adapted for cellar walls, and similar purposes, for lime, &c., as in general it is deposited in thin strata.

MILLS.—We have excellent flouring mills and saw mills; the number not precisely known to the writer; but it may safely be stated, that we have 9 or 10 good flouring mills, and about 20 or 25 saw mills. Wheat being of the first quality, our mills are doing a thriving business, and the flour manufactured is equal to any in the country.

TIMBER.—This part of the State abounds in fine timber, such as oak, black walnut, poplar, ash, hickory, cherry tree, sugar maple, &c., &c.

Remote from market, there has been until recently, but little stimulus to improvement in this part of the State; but now a change has come, and perhaps there is no part of the State where improvements are more rapid, than in this and the neighboring counties. The advantages of canal navigation, (the canals are yet

open on this, the 28th Nov.,) improved roads, turnpikes, and the advanced condition of our great improvement, the Bellefontaine and Indiana Railroad, which will be finished early next fall, have given us present and near prospective advantages, which will soon place this county on an equal footing with the more prosperous portions of the State.

Escheated lands—none in this county.

Permits for shows. Out of the fees paid into the county treasury, the State Board is entitled to \$64 12.

JOHN P. HAGGOTT, *Sec. S. C. A. S.*

Abstract of Treasurer's Report.

	Cr.
By cash received from members.....	\$66 00
“ “ “ donation	1 00
“ “ “ county treasury.....	67 00
	<u>\$134 00</u>
	Dr.
To cash paid on orders for premiums and incidental expenses.....	\$53 50
To cash, balance on hand.....	80 50
	<u>\$134 00</u>

THOS. STEPHENSON, *Treas. S. C. A. S.*

Sidney, O., Nov. 28, 1851.

STARK COUNTY.

BY JOHN S. COOK.

PRINCIPAL CROPS.—Wheat, Corn, Oats, Barley, Rye, Clover Seed, Flax Seed, Potatoes, Hay, &c. The other products are the various kinds of live stock, butter and fruits.

1. WHEAT.—The general average of wheat in this county may be put down at 15 bushels per acre. Average the past season same as that of last year, say about 20 bushels per acre. Our wheat crops are frequently injured by the fly, rust and frost; though we have suffered but little from any of these causes for some years past. Smut has almost entirely disappeared. The amount produced this year is probably not far short of 1,500,000 bushels. Our farmers generally seem inclined to favor the cultivation of the white, smooth wheat, of which we have three varie-

ties, all of superior quality for flouring, viz: the Soules, or Yorkshire flint, the Hoover, or Genessee white flint, and the blue-stem white, either of which, I think, cannot be surpassed by any other varieties now used. I have tried all of the above varieties in our heavy beech lands, and have succeeded in getting from 20 to 25 bushels per acre, of superior quality, weighing from 62 to 65 lbs per bushel.

In low lands, some prefer the red bearded varieties, but the white wheat always commands the best price in market. Average price since harvest, sixty cents per bushel.

Our wheat has heretofore been sold at Massillon, and other points on the Ohio Canal. Considerable quantities are now sold at points on the Cleveland and Pittsburgh Railroad, which will soon become an outlet for much of our wheat to the lake.

2. CORN.—General average, 40 bushels per acre; this year 30 per cent less, owing to excessive drouth—mostly fed to stock—price, $37\frac{1}{2}$ to 40 cents per bushel.

3. OATS.—Yield, generally, 45 bushels per acre; this year say 35.

4. RYE.—Yields from 15 to 20 bushels—is not extensively cultivated, and used mostly for horse feed—worth 40 cents per bushel.

5. BARLEY.—Average yield, 30 bushels per acre—worth $62\frac{1}{2}$ cents per bushel—about 25,000 bushels produced annually. Barley stubble is considered, by some, a better chance for wheat than oats stubble.

6. HAY.—Average yield, $1\frac{1}{2}$ tons per acre. Owing to the dry season, this crop will fall short of the usual average; say 1 ton per acre. It is now worth from \$5 to \$7 per ton, according to location.

7. ROOT CROPS.—Potatoes. Average yield, say 150 bushels per acre. This year inferior in quality as well as small in quantity. Less complaint of rot than heretofore. Those most esteemed for table use are pink-eyes and Neshanocks. The long reds are considered less liable to disease, and are still cultivated to considerable extent.

8. FRUITS.—Apples, for two years past, almost entirely killed by frost, though we boast generally of our superior fruit, and have all the most approved varieties of apples, as well as peaches and other fruits suited to our climate, and frequently export dried fruit in large quantities.

9. SEEDS.—Flax is grown to some extent in the eastern part of this county, for the seed, and is considered by many of our farmers as more profitable than oats or barley, and that it leaves the ground in better condition for wheat. Average yield, say 12 bushels per acre, worth this year \$1 25 cents per bushel.

We generally produce large quantities of clover seed—this year almost an entire failure—though of this item we have sometimes produced more than ten thousand bushels per year; now almost impossible to procure it at any price. Timothy seed, sufficient for home demand, worth \$2 per bushel.

10. **DAIRY PRODUCTS.**—But little cheese made in the county. Our supply is mostly obtained in the Western Reserve. We export from sixty to seventy thousand pounds of butter annually; worth 10 cents per pound.

11. **SHEEP AND WOOL.**—Great numbers of sheep have been driven from this county the past year. There has been, perhaps, no increase in the number of sheep or quantity of wool. These items may be set down the same as last year, viz: 160,000 sheep; yield, 500,000 pounds of wool, worth 45 cents per lb. We have every variety of sheep from the finest Merino and Saxony down to the common native coarse wool. The flocks of A. Hildebrand, H. Everhard, and J. McDowel, are perhaps equal to any in the State.

12. **PORK.**—Amount produced, say 5,000,000 pounds, worth from 4 to 4½ cts per lb., all slaughtered in the county.

13. **BEEF.**—Say three to four thousand driven east. I have not the means of knowing the quantity slaughtered for home consumption, and would refer you on that subject to our last report. Since the organization of our agricultural society, we have had a decided improvement in cattle; some of our best farmers have imported, from the Western Reserve and Scioto valley, bulls and cows of the most approved breeds.

14. **HORSES AND MULES.**—Number of horses annually produced supposed to be about 5,000. There is a decided improvement in this item of stock. The display of fine horses at our late fair exceeded our most sanguine expectations. The average value of horses at four years old may be set down at \$70.

15. **IMPLEMENTS.**—It was a subject of remark, by visitors from neighboring counties, at our late fair, that our exhibition of agricultural implements was fully equal, in all respects, to any thing of the kind they had seen.

Wheat drills, reaping machines, and threshing machines, are now generally used with success and decided advantage. Subsoil plows, manufactured by Mr. J. Johnson, of Wooster, have been introduced of late, and in heavy clay soils are found, from experience, to be at least one thing needful. By subsoil plowing I have succeeded in getting a good crop of wheat, where my wheat always froze out before using the subsoil plow.

16. On the subject of renovating worn soils, I know of no experiments except one of my own, on a small scale, the details of which are as follows:

A small piece of ground, containing 74 square rods, on which I had for five years grown potatoes, corn, spring wheat, then buckwheat and oats, without any manure; in April, 1850, plowed and sowed oats, at the rate of 3 bushels seed per acre; on the 26th of June, plowed down a crop of green oats, and subsoil plowed sixteen inches deep, and then sowed down in buckwheat; on the 10th of August, plowed down a heavy crop of green buckwheat; on the 15th September, plowed again, about four inches deep, and sowed three pecks of wheat, and harrowed in. The wheat came up handsomely, grew finely, and stood the winter well, and yielded 14 bushels from 74 square rods. This I consider a great yield. The soil

had been previously exhausted by bad farming, and is a heavy clay loam. This is equal to $30\frac{1}{2}$ bushels per acre.

17. MINERALS.—We have none, except coal, which is exported in considerable quantities to Cleveland, and is found in the hills of the Tuscarawas river and southeastern part of the county. Beds of coal have recently been discovered in Marlboro', and other parts, where it was before unknown.

We have no escheated lands in this county. For particulars in relation to our organization and progress, I refer you to the accompanying report of our Secretary.

Respectfully submitted,

JOHN S. COCK, *President.*

REPORT BY MADISON RAYNOLDS.

The Stark County Agricultural Society was organized at Canton, on the 22d day of February, A. D., 1850, at which time a constitution and by-laws were adopted, and the following officers chosen :

ARVINE WALES, President, Massillon.
RODMAN LOVETT, Vice President, Canton.
JOS. R. SHELLEY, Secretary, Massillon.
HARMAN STIDGER, Treasurer, Canton.

At an adjourned meeting of the society, held in Canton on the 8th day of April, A. D., 1850, the following board of officers was elected for the year 1850, viz :

ARVINE WALES, President, Massillon.
RODMAN LOVETT, Vice President, Canton.
MADISON RAYNOLDS, Secretary, Canton.
HARMAN STIDGER, Treasurer, Canton.

The proceedings of our society for 1850 are all correctly published in the report of the State Board of Agriculture.

At the annual meeting of our society, at Canton, on the 22d day of February, A. D., 1851, the following officers were duly elected for the ensuing year, viz :

JOHN S. COCK, President, New Franklin.
JAMES S. KELLEY, Vice President, Massillon.
MADISON RAYNOLDS, Secretary, Canton.
HARMAN STIDGER, Treasurer, Canton.

At this meeting of the society, the time for the election of officers was changed to the second day of the fair of the society annually. A reference to the proceed-

ings and fair of the society, held in Canton, on the 15th and 16th days of October last, will show the election of officers for 1852 as follows, viz :

JAMES S. KELLEY, President, Massillon.
 SOLOMON KAUFFMAN, Vice President, Canton.
 MADISON RAYNOLDS, Secretary, Canton.
 GEO. B. HAAS, Treasurer, Canton.

KENT JARVIS, Massillon,	} Directors.
ISAIAH ESTEP, Paris,	
JOS. KEEL, Jr., North Industry,	
ABEL MCFARLAND, Canal Fulton,	
JAMES KILGORE, Massillon,	

HARMAN STIDGER, *Treasurer, in account current with the Stark County Agricultural Society :*

DEBTOR.

1851.			
October 15	To balance on hand for 1850	\$140	00
" "	To cash from county treasury	200	00
" "	To cash on subscriptions of members	240	00
" "	To cash on donations of citizens of Canton	79	00
		<hr/>	
		\$659	00

CREDITOR.

October 15.	By cash paid on premiums awarded, as per voucher on file, \$274	00
" "	By cash paid for printing	31 50
" "	By cash paid for stationery	2 75
" "	By cash paid for materials and labor, fitting up grounds and buildings	46 75
" "	By cash paid for merchandise for use of fair	26 63
" "	By cash paid for incidentals	1 50
" "	By cash paid Secretary's salary	15 00
" "	By cash paid premiums yet unpaid, as per Secretary's state- ment	99 50
" "	By cash on hand, balance	155 41
" "	By cash paid for grain, hay, &c., for use of fair	5 96
		<hr/>
		\$659 00

The foregoing is a statement of the account current of the transactions of the Stark County Agricultural Society for the present year, without giving the amount of each particular voucher for premiums, or for expenditures included in the account.

HARMAN STIDGER, *Treasurer.*

In conclusion I would respectfully represent to the State Board the propriety of getting up and publishing a uniform and plain system of keeping the books of county societies, in your annual report, viz : a record of membership, classification of articles, a plan for numbering and classifying articles at the time of entry, when the time for entering articles should close, and a plan and instructions to the awarding committee men, to enable them to make out a clear and comprehensive report. We have had much difficulty in our county on this last subject. I would also respectfully suggest the propriety of getting permanent buildings erected at the several county seats, for holding the annual fairs, and of asking the Legislature to provide the means by a tax upon dogs, circuses, groceries, theatres, and other evils of that class.

In haste, yours truly,

MADISON RAYNOLDS,

Secretary Stark Co. Agricultural Society.

A D D R E S S ,

Delivered before the Stark County Agricultural Society, October 16th, 1851,

BY JOHN H. KLIPPART.

Of all the sciences which conduce to the comfort and happiness of the human family, Agriculture ranks the foremost. In a state of nature the earth possesses a certain degree of fertility, but by Agriculture we are taught to compel the earth to yield manyfold more, than if it were not subjected to the ordeal of MAN'S intelligence. Wherever man has possessed any intelligence, and applied it to the cultivation of the soil, the grateful earth has yielded a proportionate return, so as to support in comparative comfort a large amount of population.

Agriculture in the primitive eras of every nation must necessarily have been extremely simple ; having for its object nothing more than simply to sustain life, where the science was practised. The surface was plowed—wheat, corn, barley, and perhaps other cereals were sown, and with whatever abundance nature presented in return for the soil, was cheerfully and contentedly reaped. Ages on ages undoubtedly have rolled into oblivion before much progress had been made in Agriculture as a science.

The Egyptians appear to have brought it nearer to a state of perfection as a science, than any other nation we read of in history. By their system they produced from a single grain of wheat, from 100 to 120 stalks, and each stalk produced from 140 to 160 grains ; according to Rollin, they produced from 160 to 200 bushels of wheat to the acre, and when Rome, the Imperial city of the world, degenerated, they supplied that empire from their abundance. Agriculture was held in great esteem among the Romans, and was encouraged by all possible means, being deemed more honorable than the senatorship. Their system of Agriculture was

unique, and perhaps, so far as regards political economy, the most perfect the world has ever seen. To each citizen was allowed seven acres—Cincinnatus had but four—but every citizen was required to cultivate his land with his own hands; he whose lands were properly tilled received praise, but those whose lands were negligently cultivated, received opprobrium from the censor. So long as this system was rigidly adhered to, the Romans had abundant provisions. After the expulsion of the Roman kings, and especially under the emperors, when landed estates were in a manner engrossed by a few, and these immense estates in a great measure cultivated by slaves, the product of the empire became insufficient to support, with the staff of life, her own population. Rome, the mistress of the whole world, was forced to depend upon the provinces, and finally upon the fertility of the banks of the Nile, for her supplies of provisions.

The earth, the virgin earth, was given to man for his abode, for a time. He was placed here to adapt himself to the circumstances by which he is surrounded. There has been given to men in our day and generation, as of yore, to one, ten talents, to another five, and to a third, one talent.

In Agriculture, we have hitherto had but the one talent, and that we have almost treated as was the one talent of olden time. It has only been in recent times that men, anywhere, have availed themselves of scientific principles, and have applied them so as to increase the natural productiveness of the soil, and consequently to render the earth capable of supporting an increased population.

We wish to see the five and ten talents applied to agriculture. We wish to see the earth yield the utmost she can be compelled to yield, according to nature, aided by the intelligence of MAN. In order to do this, Agriculturists must become acquainted with the laws of nature, and their mode of operation. Nature is unchangeable; she operates, under the same circumstances, everywhere alike.

In China she causes the cotton to be of a brownish yellow, and in Alabama white. Nature's operations in both cases are the same, but the circumstances are different. If the Chinese cotton be transplanted to the United States, it becomes as white as that grown in any of our slave states. Any and every improvement which accelerates the developement of nature's stores, and of her *modus operandi*, must be received as one of the greatest boons for the amelioration of the condition of the human family; because that only is the true, the sterling science, which teaches us to obey and to act in accordance with the laws which govern the entire universe. There is not a single law governing either the animal, vegetable, or mineral kingdoms, which is not of utility to the Agriculturist; and it is essentially necessary to understand these laws, to be successful in the culture of the soil. But little, comparatively, is known of these laws by Agriculturists generally. There are many, perhaps, undeveloped, and whose action is not yet comprehended.

An erroneous idea has too long prevailed, that any kind of education is good enough for a farmer; that if he can read, write, and cypher to the 'rule of three,' is all-sufficient for farming purposes. An agriculturist, on the contrary, should

have the most thorough education. He should understand botany—should be well informed as to the mode by which plants obtain sustenance from the soil and the atmosphere; he should be familiar with the physiology of vegetables as well as that of animals. He should be a good chemist, for the reason that plowing, seeding, manuring—in short, every thing which pertains to the production of crops and their preservation, are, strictly speaking, chemical manipulations; besides, it is very, nay, essentially necessary, that every agriculturist should know the composition of the soil upon which he proposes to operate.

He should, for obvious reasons, understand anatomy and physiology. Much of his time is devoted to rearing horses, cattle, swine, sheep and poultry, and he should have sufficient knowledge of drugs to prevent any havoc by disease among his flocks. Natural philosophy should be well understood by him, for the reason that agriculturists have too much manual labor to perform, and it is necessary that they should avail themselves of the development and combinations of geometry, of motion or machinery. Many more implements are necessary for a perfect system of Agriculture than those now in use. And who shall invent them? Shall tailors or watch-makers be the elect to make additions to the stock of agricultural implements? Did a miner invent the electric telegraph? Did a shoemaker invent the reaping machine? A weaver the threshing machine? Or did a fuller invent the sub-soil plow? Surely not. Agriculturists must look among their own ranks for the proper inventions for their avocation. When the agriculturist will have a good general knowledge of the laws of nature, the elements and circumstances by which he is surrounded, he will have a greater confidence and a brighter hope that his toil will be amply rewarded. At present his toil is little else than a game of chance. Although he plow deep, select the most famous seeds, bestow all the attention his forefathers taught him, he is not certain that the harvest will be bountiful.

When the idea obtains, that it is really necessary for the agriculturist to be a scientific man, then, too, will Agriculture rank, where it ever should have ranked, namely, as being the first and most important of all sciences.

One serious obstacle to the car of progress in Agriculture, lies, I think, in the fact, that agriculturists generally possess too much land.

If two blades of grass can be made to grow where now only one grows, it follows necessarily that one-half the land would produce the same result. When the Romans cultivated each man his seven acres, they then plowed the fields from seven to nine times, but when under the reign of the emperors a few owned all the estates, their slaves plowed the lands but twice, and the result is known to every reader of Roman history.

It is impossible to bestow as much care and attention to cultivating 80 acres as there can on 40, by agriculturists generally. I am fully persuaded, that if the same amount of plowing and manuring were bestowed on forty acres, that there are on eighty, that the agriculturist would find himself the gainer. I know of a

number of five acre fields which produced forty bushels of wheat per acre, but I do not know of a single twenty acre field which produced exceeding twenty bushels per acre. Abner Lodge, of Belmont county, raised $101\frac{1}{2}$ bushels of wheat last year on less than two acres, whilst the average crop of Belmont county was but 16 bushels per acre. Geo. Pow, of Mahoning Co., raised 160 bushels from 4 acres, whilst the average for the county was perhaps 18 bushels per acre. Mr. Pruden Allen raised $120\frac{1}{2}$ bushels of corn per acre, off two acres, in Huron county, whilst the county average was but 45 bushels. Mr. James Nicholson, of Harrison county, raised $73\frac{1}{2}$ bushels potatoes from $\frac{1}{4}$ of an acre. These statements are attested by respectable men in the different counties where these results were obtained, and extraordinary as they may appear, we have no good reason to doubt them, and further, we have no good reason to doubt that the same results might not be obtained in Stark county.

Or are we to sit down and fold our hands across the breast, and say it happened so by chance? One thing is very certain, nature never deals in chance. As before stated, under similar circumstances she produces the same results. If, then, you will obtain the same kind of soil as that upon which Abner Lodge, of Belmont county, experimented with wheat, and will bestow the same labor, care and attention to it that he did, my word for it, you will have the same result, namely, 53 bushels of wheat per acre. Agriculturists attempt to cultivate entirely too much land, and the consequence is, that it is not properly cultivated. The products lessen year after year; the rot has affected the potato, the fly and rust have destroyed much wheat. Thirty years ago this was not the case in Stark county. If a farmer sowed wheat, he could depend with certainty on gathering a harvest. He had no fears that the fly nor the rust would destroy it; he feared only the storm, hail and hurricane. Why is it that the fly affects the wheat—the rot the potatoes? It is because the soil is degenerating—is becoming exhausted; too much of the essential parts of the soil have been exhausted, and have not been replaced. Scarcely any other than barn-yard manure has been applied to the soil, to restore its fertility. This kind of manure is not, perhaps, the proper kind of a fertilizer. The surface soil of alluvial land in this State, which is most remarkable for its fertility, consists of

Silica and fine silicious sand.....	79.538
Alumina.....	7.306
Peroxide and Proxide of iron.....	5.823
Potash.....	0.000
Soda.....	0.024
Phosphoric acid.....	1.776
Sulphuric acid.....	0.122
Chlorine.....	0.036
Humus.....	1.950
Manganese.....	1.320
Lime.....	0.619
Magnesia.....	1.024
Nitrogenous organic matter.....	0.236

It is possible that the earthy phosphates have become exhausted, and barn-yard manure will not replace it. Here allow me to suggest a method of preserving barn-yard-manure, somewhat different from what is generally practised. It is simply this: Make a circular or square excavation in the barn-yard, say 30 feet in diameter, one foot deep at the circumference, and about five feet deep at the centre; have the bottom clay—if not naturally clay, line it with clay, so as to retain water. This done, put in a layer of straw, and then as manure accumulates, deposit it on the straw, until a stratum of a foot is obtained, then deposit a stratum of lime and another of ashes, each about one inch thick. By this method, ammonia, the most valuable portion of manure, is retained. The lime and ashes are in this manner combined with the manure, and the action is more powerful than if each is applied separately.

An erroneous, but general idea has obtained, that new grounds should first produce a crop of buckwheat, for the purpose of taming the soil. It does tame, as the manacle, shower bath, chains and bars tame the State prisoners at Auburn; it tames by ruining. A single crop of buckwheat will exhaust as great a proportion of the earthy phosphates of the soil, as does five or six crops of wheat. You may manure such an exhausted soil as much as you please, it will not produce as good, nor as large a crop, as if the phosphates were restored. Buckwheat will, in course of time, make a rich soil sterile. Potatoes absorb more potash than any other ingredient of the soil. The ashes of potatoes, when analyzed, are found to consist of

Carbonic acid.....	13.4
Phosphoric acid.....	11.3
Sulphuric acid.....	7.1
Chlorine.....	2.7
Potash.....	51.5
Soda.....	trace
Silicia.....	5.6
Oxide of Iron.....	0.5
Lime.....	1.8
Magnesia.....	5.4
Charcoal.....	0.7

In this analysis we find that potash is the principal ingredient, hence the soil should abound in such elements as compose the potato; potash and carbonic acid being the two principal ones. As a general thing, decomposing turf, forest leaves in a state of decomposition, wood ashes, and fresh or new lands, abound in all the constituent elements of potatoes. Fields which have for a long time been cultivated, with little or no sod, small amount of vegetable mould, and but a trace of alkaline salts, in a short time so impair the vital force of this valuable plant, that premature decay is expected. On new land, rich in organic matter, and rich in alkalies and alkaline earths, 400 bushels were a common yield; in process of time, 200 became a good harvest; then 150, and now, on our degenerate soil, we are to be

content with 30! We do know that 400 bushels of potatoes have been raised to the acre, and what has been done can be done again. No farmer should despair of its accomplishment, but on the contrary, set himself to work with a firm determination to raise that number of bushels on an acre. Dr. Lee, a scientific gentleman of New York, who has written a splendid treatise on geology, in a letter to the editor of the Albany Cultivator, says:

"More than one-half of the ashes of the potato is pure potash. A sugar maple, a grape vine, a potato plant and an apple tree, require a soil that abounds in potash. In every town I have found scientific farmers, who, by the use of unleached ashes, lime and plaster, in equal parts, and placed in the hill with the seed, and on the hills as soon as the tops are well grown, have wholly escaped the potato rot, and have harvested for several years from 5 to 600 bushels per acre."

I have given you the analysis of a specimen of fertile soil in Ohio; I will now give an analysis of wheat, corn, buckwheat and clover.

The ash of wheat is composed of the following substances:

Silica.....	2.23
Phosphoric acid.....	45.73
Sulphuric acid.....	0.32
Lime.....	2.06
Magnesia.....	10.34
Peroxide of Iron.....	2.04
Potash.....	32.24
Soda.....	4.86
Chloride of sodium.....	0.27

The prominent substances which enter into the composition of wheat, are phosphoric acid and potash. It is recommended to plow 10 or 12 inches in depth; to manure with clover, and to sow 2 bushels per acre, and then give a top dressing of plaster in the spring. This mode will, it is said, prevent the fly, rust and winter killing. It has frequently been remarked, that through the exhaustion of the soil and bad tillage, the wheat crops are decreasing and becoming more and more subject to disease. For this there is but one remedy—an improved remedy of culture. Farmers must supply to the soil those elements necessary for the formation of healthy wheat plants, which are constantly being taken from the land and not replaced.

The substances which enter into the composition of the ashes of buckwheat, are,

Silica.....	7.08
Earthy phosphates.....	57.60
Lime.....	0.14
Magnesia.....	2.66
Potash.....	23.30
Soda.....	2.03
Sulphuric acid.....	7.34
Chlorine.....	0.20

The ash of corn consists of

Silica.....	9.50
Alkaline and earthy phosphates.....	25.50
Lime.....	0.16
Magnesia.....	2.41
Potash.....	23.93
Soda.....	22.59
Chlorine.....	.40
Sulphuric acid.....	4.38
Organic matter.....	0.36

Silica being one of the component parts, makes it reasonable to infer that a sandy soil is required. Potash enters largely into its composition. This would lead us to infer that leached ashes would be a good manure, and it contains 4 per cent. of sulphuric acid, and would appear to indicate that a top dressing of plaster would not be lost.

The ash of red clover contains

Silica.....	3.34
Phosphoric acid.....	6.35
Sulphuric acid.....	4.18
Carbonic acid.....	16.93
Lime.....	35.39
Magnesia.....	1.22
Peroxide of iron.....	0.97
Potash.....	14.85
Soda.....	1.40
Chloride of sodium.....	2.30
Chloride of potassium.....	2.96

We have long since been assured that where the soil abounded in lime, it produced the best clover. By the above analysis, it will be seen that there is 35 per cent. of lime in clover, hence the utility of liming lands upon which clover is to be grown; hence, also, the utility of clover as a manure. Every ton of clover contains ten pounds of phosphoric acid, fifty-five pounds of lime, seventeen pounds of magnesia, and twenty-three pounds of potash. For every ton of clover which is plowed down as manure, the earth receives 128.4 pounds of mineral substances.

It is of great importance to the agriculturist to have an analysis of this soil, as well as an analysis of every thing he wishes to produce upon his soil. I am well aware that agriculturists are opposed to book-farming and agricultural chemistry, but their opposition is inconsistent. Were it otherwise, no person could understand anatomy except the butchers, and none but they could be capable of performing a surgical operation. Anatomy, Physiology, Materia Medica, Surgery and the practice of medicine, are all obtained from books—why not Agriculture? The practice of medicine is no less practical than plowing. I have no doubt that agricultural chemistry has failed to meet the anticipations of some; but when the circum-

stances are considered under which it failed, I think that the least part of the failure is to be attributed to the science.

Very little is known, and *less* practised of agricultural chemistry throughout this region of country. Where any thing of the kind has been done, it has generally been guess work, and to me it does not appear strange that guess work does not fully compete with scientific observations and experiments. Suppose a person ignorant of chemical manipulations, should undertake to manufacture calomel—is it not possible that he very unwittingly would produce corrosive sublimate, a deadly poison? Thus it is with agricultural chemistry. Hence the necessity for a geological survey, and the establishment of Agricultural colleges—at least 3 or 4 in the State of Ohio, because we are eminently an agricultural people.

To agriculture, a geological survey is both directly and indirectly beneficial, to an extent which deserves the serious consideration, not of the agriculturist alone, but of mechanics, professional men, and the Legislature. It is of immediate interest to the agriculturist, for the reason that it furnishes him with unerring data to trace out the sources whence the soil in his immediate vicinity was derived, and the regions of country in which similar soils prevail, so that the agricultural experiments of different localities, upon identical soil, may be compared. The soil, sub-soil and strata will be analysed, and will show which strata are fertilizing and which are not. The analysis of the sub-soil is equally as important as the soil. Here is an instance which exhibits the necessity of such analysis. A field had been sown in *sain-foin*—a kind of grass—the first and second years the crops were unexcelled, but the third year it began to die out; the soil was analysed and found to be deficient in no essential ingredient; this caused some surprise; the subsoil was then analysed, and found to contain sufficient sulphate of iron (copperas) to destroy the crop. The first and second years the roots had not penetrated into the sub-soil, but the third year they did, and the result was fatal to the crop. A geologic survey will furnish you with data to trace such strata as are natural manures, discriminating between the pure limestones and the magnesian ones; between those which possess the powerful element of phosphorus and those which are deficient; indicates what shales and other strata which are constantly decomposing, are already naturally calcareous or gypseous, and are of themselves competent, by proper mechanical treatment, to replenish the soil sufficiently with lime and plaster; and what other strata are deficient in these essential elements, and produce soils which require their artificial introduction. A Mr. Kuhn, of Ashland county, writes, that so far as his experience goes, that the application of lime and plaster to lands in his vicinity, are labor and money thrown away. Mr. Kohler, of Lehigh county, Pa., says that his neighbor applied lime to a meadow, and it produced one-third more grass than usual. I have found nothing so difficult as to learn from our farmers whether lime is, or is not, a fertilizer. For example; one farmer applies 20 bushels of lime to an acre, and the result is that his crop is nearly doubled—another farmer, probably in the same neighborhood, makes a similar application, and finds

to his mortification that it has not increased his crop. Why is this? Nature, under similar circumstances, always produces the same result. The failure of the lime, in the case last mentioned, arises solely from the fact that the composition of the soil was not understood; that some of the other elements, and not lime, were wanting to make it more fertile. A very exact knowledge of the nature and composition of soils, as well as of the rocks upon which they rest, and elements of the plants to be grown upon them, are essentially requisite to enable the farmer to apply such fertilizers as will best promote the growth of healthy, vigorous and abundant crops. An improved and truly economical culture of the soil must be founded upon such knowledge, and this indispensable knowledge can only be procured through a careful study of the rocks and strata out of which the soils are derived. Hence it is that geology is now universally regarded by the professional teachers, scientific writers, and the most skilful men in practice in agriculture, as equally fundamental with chemistry, in its relations to sound modes of cultivation.

No better proof need be required of this fact than the titles and scope of all the treatises, comprehensive and abridged of Prof. James F. W. Johnston, of England, who has devoted the labors of a life-time to the production of works expressly on agricultural chemistry and geology, and who is perhaps the ablest expounder of this great art now living.

The adaptation of the crop to the soil and climate is the first practical problem which the agriculturist must study in any region of the country. But how is he to know the adaptation of the soil, if he possess not an exact knowledge of the nature and composition of the strata by which it is encompassed and from which it is derived; except he have this knowledge he can have no true insight into the chemical and mechanical properties of the soil which is nothing else than the substance, whole or in part, of those rocks in a decayed or decomposed condition.

The whole art of preserving or improving the fertility of a soil, consists in replenishing it with those elements which the crops are ascertained to abstract, and in the proportions suitable to repair the waste and to meet the indispensable demands of vegetation. These proportions can only be known after we have fully ascertained what the decomposing rocks themselves supply and what they fail to furnish.

I could refer you to many examples of a sudden impulse given to agriculture, by the publication of the results of geological surveys. A striking instance is the marl region of New Jersey, where the farms have been enriched, and their produce multiplied by the disclosures of the true character and extent of beds of green sand, or marl, by Prof. Henry D. Rogers. Another instance has reference to the old farms of Eastern Virginia, which have been revived since Prof. Wm. B. Rogers made known the abundant deposit of calcareous marl of that portion of the State. The emigration from the northern and eastern States to that worn out region has been excited principally by the prospects of benefits dependant upon the marl manures.

The geological survey of Ohio, which had been commenced in 1837, and discon-

tinued in 1838, augmented the value of real estate in a single county at least \$100,000, and by some estimated at five times that amount.

In the Netherlands, the results of a geological survey converted the most barren sands into fruitful fields. Even the white drifted sands of Cape Cod are now changing to bright green fields, and much of the credit is due to a geological report made by Prof. Hitchcock of Mass., who was ambitious to point out means to make two blades of grass, or two ears of corn, grow where but one grew before.

The foregoing view, applicable to any country owning mines, manufactures and an improvable soil, has an especial force in the case of Ohio, for her territory is rich in all the best treasures which the strata of the globe can yield.

Must it be said by the sister States that Ohio has no mineral wealth, nothing to be improved or developed in agriculture, while southern, eastern, northern and western States are actively engaged in the development of their mineral resources.

Prof. Mather, (now State chemist), in his report of the geological survey of Ohio to the Legislature, remarks that, "Ohio has never yet retraced her steps in any work of public utility that she has undertaken, and the idea can scarcely be entertained, that she will withhold the appropriation of a few thousands, by the expenditure of which millions will be returned to her citizens."

In any event, whether we have a geological survey of Ohio or not, we should have agricultural colleges where farmers' sons could be taught practically, as well as theoretically, everything pertaining to the nature and composition of soils, subsoils, as well as physiology, both as it relates to vegetables and animals, where, in short, they would be taught everything relating to successful agriculture. Crops under their management then would become more certain and more abundant, and our finances, as well as our morals and social condition, be improved. We have erected colleges and seminaries for the study of law, medicine, and the conflicting shades of theology, but where are the agricultural colleges, of more immediate, or at least equal importance, to us with any of the above named? Our soil is becoming impoverished and degenerate, our crops are little else than a game of chance, or at best are uncertain; our young men are becoming either professional men or idlers, and in many instances both, and yet we hear not a word about an agricultural college, in which lies the redemption of our soil, our crops, our morals, our social and political condition. In every instance where chemistry has been intelligently applied to agriculture, it has invariably repaid the toil and expense munificently; I know of a number of such experiments, and will cite you one of the number:

"Mr. Reverdy Johnson, says the American Farmer, purchased, in 1848, a small farm near Baltimore, in the last stages of impoverishment. Such was its reduced condition that the last crop of corn was not more than a peck to the acre. He states that all the vegetable matter growing on two hundred acres of cleared land, including briars, sassafras and other bushes, if carefully collected, would have been insufficient for the manufacture of one four-horse load of manure. He applied to

Dr. David Stewart, of Baltimore, an able chemist, who rode out to the farm, and procured specimens of the soil, which he carefully analysed. He found that it contained an abundance of lime, potash, magnesia, iron, and organic matter, duly mixed with alumina and sand. One element only, of fertile soil, was wanting, phosphoric acid; and of this there was no trace. He commenced an application to the soil, of biphosphate of lime, a preparation of bones, as the best mode of supplying the deficient element. The remedy was given, at an expense of ten dollars per acre. It was the one thing needful. Health was restored to the exhausted patient, and the grateful soil yielded last year twenty-nine bushels of wheat to the acre. Nothing else was applied, indeed nothing else was wanting. Here was a beautiful triumph of science. There is no doubt of the facts; the experiment came under the observation and attracted the attention of hundreds. It was detailed by Mr. Johnson himself, and various others worthy of perfect reliance."—*Plough, Loom and Anvil*.

I am aware that it is usual upon occasions like the present, to extol the state of our present prosperity, the flourishing condition of our agriculture—that in half the century we have transformed a wilderness into a blooming garden; that from a colewort, a pigmy vegetable of scanty leaves, weighing altogether scarcely half an ounce, we have produced the monstrous cabbage, a diminutive little root, growing wild in Chili, we have obtained the inestimable potato; we have transformed the acrid crab apple into the golden pippin—the hard shelled almond into the delicious ruddy peach—and the small sloe metamorphosed into the rich flavored and juicy yellow gage—that Ohio produces wheat enough for the Union, and Stark county grain enough for Ohio—this is truly laudable, but when I reflect that we have the benefit of the experience of several thousand years in agriculture presented to us; are surrounded by all the elements necessary, and in the 19th century lack the intelligence or willingness to appropriate properly these elements, that we average but 20 bushels of wheat per acre, and the Egyptians, 2,000 years ago, produced 150 bushels per acre; we average but 40 bushels corn to the acre, and less than 40 years ago William Cobbett produced 150 bushels per acre; oats 45, rye 20, potatoes but 100 bushels per acre, and even this amount rankling with disease; I feel less disposed to extol than to censure. In mechanics, in manufactures, in arts, in sciences generally, we have rapidly advanced and will continue to do so. Agricultural fairs are of great utility, because here all manner of productions come into competition; different methods of agriculture discussed, improvements in agricultural and other implements brought into general notice and their utility tested.

Second Annual Report of the Stark County Agricultural Society.

The second annual fair, of the Stark County Agricultural Society, was held in Canton, on Wednesday and Thursday, the 15th and 16th of October, 1851. At an early hour of the first day the citizens of the county were seen approaching the town from every direction, and in large numbers—thus evincing the deep interest

felt in the object of the society by the community generally. As the day advanced the numbers increased, and by noon the streets of the town were literally thronged. Most of whom continued in their attendance late the second day.

Preparations had previously been made for the accommodation of stock and for the exhibition of the various articles brought in, either as competitors for premiums, or for the simple purpose of exhibition. The two large, and four small rooms in the western wing of the academy, were appropriated for the display of vegetables, prints, domestic productions, cabinet ware, manufactures, pictures, and such other articles as were necessary to be kept under cover; the grounds around for farming implements, and poultry, and several fields for the use of stock.

In order to render the exhibition as agreeable as possible, the citizens of Canton raised, by subscription, the sum of \$100, which they presented to the society, and under the superintendence of the committee of arrangements, beautifully decorated the room for the fair with evergreens, paintings, statuary and other ornaments.

The weather being exceedingly fine, the members of the society and the visitors enjoyed an agreeable entertainment.

The only farms offered, in compliance with the printed instructions of the board of managers, were in Canton township.

So much depends on the suitable arrangement and good management of a farm, that it is deemed advisable to make the following copious extracts from their report:

The farm of Mr. John Neisz consists of 160 acres—110 of which are cleared and divided into square or oblong square fields, of convenient size, and each surrounded with a good post and rail or worm fence, including a suitable number of well formed gates. Lanes extend from the barn to each field. The principal crops raised are wheat, rye, oats, corn, millet, potatoes, hay and clover-seed. He has

40 acres of wheat, average bushels per acre.....	20
5 " rye, "	20
10 " oats, "	40
9 " corn, " shelled	40
$\frac{1}{2}$ " potatoes, "	100
1 " millet, for seed. "	25
5 " clover, "	$1\frac{1}{2}$
6 " millet, for hay, per cwt.....	35
10 " clover, "	30
15 " timothy and red top hay.....	25

100 four horse loads of stable and yard manure, per annum, hauled on to the fields, generally in June. 30 pounds of gypsum per acre are applied to the clover fields, each spring. For wheat, the ground is plowed once, as deep as two strong horses can well do it, and harrowed and rolled as often as need be to pulverize and level it; then, about the 15th of September, $1\frac{1}{2}$ bushels of seed to the acre is put in, with a patent drill, improved by Mr. Neisz, so that the rows are about 6 inches

apart. The oat stubbles are generally plowed once, harrowed level, and wheat drilled in.

Mr. Neisz keeps on his farm the following stock :

Horses and colts.....	12
Cattle (cross between native and durham).....	40
Sheep {mostly Merino full blood}.....	300

Hogs (cross between the grass and berkshire) enough to make, per year, of first rate pork, 2,500 lbs.—sells about half. Poultry of all kinds and sorts.

He has a substantial, well finished and convenient dwelling house, of brick, 36 by 24 feet, two stories high, with a wing and two porches attached, a well with wood pump in front, and one with stone pump, and a cistern with stone pump in rear of the wing of the house, very convenient and in good working order. He has a bank barn, frame, with basement of stone, 111 by 46 feet, completely finished in the basement story and outside; and so compactly filled with wheat, rye, oats, millet, hay, &c., that a two horse rat team would find difficulty in passing through it. In the barn-yard is a good well, with a pump and plenty of water-troughs. He has two large sheep stables, the lofts of which are stuffed full of hay and millet. A brick smoke house. An apple mill and cider press, under a good roof. A large and good hog house, Bee house, &c., &c. About 100 grafted apple trees, pears, peaches, cherries, plums, grapes and all such needful things plenty. There is a place for everything, and everything was in its place.

The farm of Mr. Frederick Fockenroth consists of 160 acres—110 of which are cleared and divided into suitable sized fields, well fenced and appear to be in good state of cultivation. His principal crops are wheat, oats, corn, spelts and potatoes.

25	acres of	wheat,	average bushels per acre	22
10	"	oats,	"	44
10	"	corn,	" shelled	44
$\frac{1}{2}$	"	potatoes,	"	200

An apple orchard of five acres and about 100 trees grafted and in a healthy condition. The ground has now rye and spelts growing in it:

For wheat, he plows three times, harrows as often as need be, and generally sows from the 15th to the 25th of September, 1½ bushels per acre, and puts in with a double shovel plow, unless the ground be rough, and then with a harrow.

He has 12 acres meadow, average yield per acre, 30 cwt; clover, he mows 9 acres, average yield per acre, 30 cwt; the quantity of seed used on 9 acres is one bushel.

He has per annum av. 100 loads (4 horse,) yard and stable manure, which is generally applied to the oat stubbles, after harvest, plowed under with the stubbles, and the field sowed in wheat. His plowing fields have all, within the few past years, been dressed once with lime, 50 bushels, per acre, and are now receiving the second dressing, of the same quantity. He keeps on his farm horses and

colts, all good ones, 6 head; cattle, sprinkled with durham blood, 16 head; sheep, sprinkled with merino blood, 20 head.

His dwelling house is of logs, two stories, weather-boarded and painted, 33 by 22 feet, with a brick wing, well finished. Has a well and pump at the right place. His barn is 76 by 48 feet; bank, frame, stone basement, finished in every particular; and is, in our opinion, a first-rate barn. He has also another excellent frame building, in which his corn, hogs, wagons, farming implements, &c., are housed. Everything about his premises appears to be in good order, and we think Mr. Fockenroth lives at home.

We examined partially, also, the 20 acre farm of Mr. Stephen Francois, who was not at home, nor did we find any person who could give us any certain statement concerning the crops or method of cultivating.

In deciding upon the merits of the farms examined by us, agreeable to the instructions of the board of officers published with the list of premiums, we are of the unanimous opinion that the farm of John Neisz, in the *arrangement* of buildings, lanes, gates, and profitableness, is ahead of the others, and not behind in any other important particular; we therefore, award to John Neisz, of Canton township, the first premium of \$8 and diploma, for the best managed and cultivated farm of 50 acres and upwards. To Frederick Fockenroth, of Canton township, the second premium of \$5 for the best managed and cultivated farm of fifty acres and upwards.

B. C. GOODWILL, }
RODMAN LOVET. } *Committee.*

Committee on Wheat, Corn, Oats and Hay.—Elisha Teeters, Philip McCue, and Peter P. Trump.

3 $\frac{1}{4}$ acres of white blue stem wheat, yielding 153 bushels and 40 lbs., equal to 43 $\frac{1}{4}$ bushels per acre, produced by Henry Hoover, of Plain township, quality superior, first premium, \$10 and diploma.

3 $\frac{1}{4}$ acres of Mediterranean wheat, yielding 126 $\frac{3}{4}$ bushels, equal to 40 $\frac{3}{4}$ bu. per acre, produced by Arvine Wales, of Perry, good quality; 2d premium, \$5.

2 acres and 13 rods of corn, yielding 326 $\frac{1}{2}$ bushels in the ear, produced by Jos. Keel, jr., of Pike township, quality superior to any other exhibited; 1st premium, \$5 and diploma.

2 acres of corn, yielding 294 $\frac{1}{2}$ bushels in the ear, produced by John Correll, of Plain township, an excellent quality; 2d premium, \$3.

3 acres of corn, yielding 287 bushels in the ear, produced by Abel McFarland, of Lawrence township; 3d premium, \$2.

2 acres of corn, yielding 259 bushels in the ear, produced by Henry Firestone, of Plain township.

3 acres, yielding 135 bushels oats, produced by Arvine Wales, of Perry township; 1st premium, \$3 and diploma.

3 acres and 62 rods, yielding 68 bushels buckwheat, produced by Joseph Keel, jr., of Pike township, the only entry of that grain.

Report on Sheep.

The committee remarked that the exhibition on sheep was very good indeed; that among them was a very excellent Buck, owned by Mr. Henry Everhard, but excluded from competition in consequence of being, in their judgment, crossed blood, rather more Saxony than Merino. Also, several very good bucks, owned by Mr. A. Hildebrand, which were excluded because not shorn last spring.

Mr. James McDowell, to whom was awarded the first premium for the best managed entire flock of sheep, furnished the committee a statement of his mode of management, which contains many valuable thoughts, well worthy of consideration by persons interested in that description of stock. He says:

"About the 1st of November I separate the ewes into lots of 25, and put a buck in each lot. I aim for the most valuable fleece—experience having taught me to avoid both extremes, and produce the fleece in which quality and quantity can be combined.

I mark the buck lambs from the best ewes, for the purpose of keeping them for bucks. Docking and altering will do any time before the weather gets too warm. I regulate my sales so as to keep no sheep over five years old. This, it is true, gives me a large number of young ewes to breed from, which do not raise so many lambs the first year as older ewes do, but the deficiency is made up by the young ewes having a heavier fleece, and by their growing into value while the older ewes are growing out, and it likewise enables me to sell my sheep when they are at their highest value.

Management.

I wash my sheep about the first of June. My mode is to soak them; then wash under a spout; shear as soon as they are dry, and tie up with twine. Trim off any horns that interfere, and claws that are too long for comfort. I then divide my sheep into lots according to the size of my pastures. I salt once a week, giving about three pints to a hundred head; changing pasture as often as circumstances will admit. I wean the lambs in the latter part of August, and turn them on the best pasture I have, separating the bucks from the ewes, and put a couple of older sheep into each lot for leaders. About the first of October I commence housing my lambs; feeding them a small quantity of bran—oats or corn chopped with the cob, which they will soon learn to eat, if sprinkled with salt. It is best to commence feeding in time. Hay is my principal food. I water my sheep every day, and when the weather is hard, I turn them back into the stable, littering plentifully with straw.

Within the past year I have sold 10 sheep for \$15; gave out on the shares 75 yearlings, $\frac{2}{3}$ of them ewes, $\frac{1}{3}$ weathers, which is equal to \$400 at 10 per cent.:

sold wool for \$522 19; increase \$2; loss 4; have on hand \$13; had on hand last November \$20.

RECAPITULATION.

Had on hand last November.....	320	
Increase	82	
		<u>402</u>
Sold	10	
Died.....	4	
Gave out on shares for 3 years.....	75	
		<u>89</u>
Present number.....		<u><u>313</u></u>

PROFITS.

Sold wool for.....	\$522 19	
Sold sheep for.....	15 00	
Estimated value of increase.....	400 00	
Total.....		<u><u>\$936 19</u></u>

The following is from the pen of Mr. J. Neisz, to whom was awarded the premium for the best mutton sheep :

In the summer season we keep them on pasture of clover and timothy ; and change them from one field to another every week or ten days, observing to salt them twice a week. In autumn, when pasture becomes hard and dry, we feed them on good hay.

In the winter season, we fold them in warm but airy sheds or stables, and feed them well on hay until within about two weeks of weaning time, being careful to keep the puny ones by themselves. Their feed at this time, in addition to hay, is corn and cob cracked fine, with one half shorts or bran mixed with corn fodder cut short. With this we continue feeding them until pasture comes on.

We wash them about the last of May, and clip them the first of June. Then we sort them into flocks of about one hundred each, and mark them according to their grades, disposing of the old and puny ones.

The lambs are weaned in August. Last spring out of 73 ewes to bucks gave an increase of 54 lambs.

Sold to F. C. Reed, of Massillon, 250 fleeces. Weight 744 lbs., at 48 cents per pound.

Price of selling, after clipping ewes, \$3. Bucks from \$5 to \$10, according to quality.

SUMMIT COUNTY.

OFFICE OF THE SUMMIT Co. Ag. Society,
AKRON, Nov. 29, 1851.

State Board of Agriculture :

GENTLEMEN :—The principal crops grown in this county are Wheat, Corn, Oats, Buckwheat, Clover Seed, Hay, Potatoes, Rye, and some Barley and Flax ; other products, Pork, Wool, and Coal. Stock—Sheep, Horses, Cattle and Hogs.

1. **WHEAT.**—The usual average product of wheat, for five or six years past, until last year, was perhaps from 16 to 18 bushels per acre. Last year's average, taking the assessors returns last March, was about 22 bushels per acre. Number of bushels grown in this county, in 1850, five hundred and thirty thousand—add ten per cent. for 1851. Market price, 65 to 68 cents per bushel. Our market place is Akron, the county seat of this county. A much larger quantity of wheat is purchased and floured in Akron yearly than is grown within the county. The kinds of wheat sown in this county are various. The Mediterranean has been raised quite extensively—less so now perhaps than two or three years ago. Our millers do not pay as much for it as for some other varieties. The south and middle portions of the county are better calculated for wheat than the northern part. The south and central portions raise the wheat and the northern part the hay, oats and dairy products.

2. **CORN.**—Last year's average, about 30 bushels to the acre. Amount raised last year, 320,000 bushels ; about the same this year. Price, about 37½ cents—mostly fed to hogs, horses and cattle. Two or three distilleries supplied.

3. **OATS.**—Average yield, we think, this year, about 50 bushels per acre—better than usual.

4. **RYE, BARLEY, and BUCKWHEAT,** not very extensively grown.

5. **GRASS AND HAY.**—Average about 1½ tons to the acre—crop short this year, occasioned by the drouth. Hay seven to eight dollars per ton. Our best crops of grass and hay are grown in our northern townships.

6. **ROOT CROPS.**—Potatoes, average past season, about 80 bushels per acre. Crop injured by drouth—not injured so much this year by “rot” as formerly ; in fact we hear but little, if any, complaint from rot this year. Heretofore, no variety has escaped that malady. No other root crop is grown in this county only for home consumption.

7. **APPLES,** of superior quality, are extensively grown in this county generally. This year, almost a total failure ; cause—late frosts last spring—price 87½ to \$1 per bushel. The peach crop was not as large as usual this year, but had enough for home use. There is much interest manifested by the people of this county in the improvement of the various kinds of fruit grown in this State, particularly apples, peaches, pears, grapes, strawberries, raspberries, &c.

8. **CLOVER SEED** is quite extensively cultivated in the wheat growing portions of our county; price about \$4 per bushel. Considerable timothy seed is also grown; crops short this year. Many farmers are growing more flax for the seed than formerly; price, \$1 to \$1 25 per bushel, marketed at our oil mills, of which we have two or three extensive ones in the county.

9. **DAIRY PRODUCTS**.—Cheese and butter is quite extensively manufactured in the north part of the county; both good. Much cheese is shipped and some butter.

10. **SHEEP AND WOOL**.—Many of our farmers have turned their attention to wool growing; a very large quantity is annually shipped, and much is manufactured at home. There are many large and excellent flocks in the county. The Merino and Saxon are increasing rapidly. Messrs. Perkins & Brown, and C. B. Cobb, of Portage township, Humphrey & Baldwin, of Hudson, J. W. Wallace, of Northfield, Oviatt & Welton, Richfield, Jonathan and Simon Starr, Copley, Penn & Ashman, of Tallmadge, perhaps, have as good flocks as any in the county.

11. **PORK**.—Quality fair, mostly slaughtered in the county; amount of pork consumed in, added to the amount sent out of the county, would be, probably, about 2,174,000 pounds; price, \$4 to \$4 50 per cwt.

12. **BEEF**.—Quite a quantity of cattle are raised in the northern part of the county, for foreign markets—this year scarce and high—stock improving.

13. **HORSES AND MULES**.—But little interest felt in improving our horses—no mules.

14. **IMPLEMENTS**.—Wheat drills are being used, though not extensively in our county. Machines for threshing, that thresh and clean the grain at the same time, are in general use; subsoil plows and cultivators are used to some extent.

15. **OTHER IMPROVEMENTS**.—Our farmers and mechanics are quite alive to their interests, and are adopting various improvements worthy of their attention.

16. **MINERALS**.—Large quantities of coal are found in various portions of this county, of excellent quality. Two or three firms do a very large business in sending it to Cleveland, for steamboat use.

17. **MILLS**.—A very large flouring business is done in this county. There are also in the county three or four extensive woolen factories.

A very large quantity of pottery ware is manufactured in the county, also stone ware pumps, by Messrs. E. H. & C. J. Merrill, of Middlebury, a cheap, durable and every way desirable article; also, stone water pipe, of all sizes, manufactured at the same place, by same firm, and by Messrs. Hill & Foster, an excellent article for conduits.

Amount charged for shows the present year, one hundred and forty dollars.

STATISTICS.—The assessors, in March last, returned an aggregate of personal property, amounting to \$1,527,225, exclusive of \$163,000 bank capital, as follows:

	Number.	Value.
Horses	6,193	\$266,761
Cattle	19,041	219,341
Sheep	79,878	44,030
Hogs	10,782	17,223
Pleasure carriages	1,570	60,126
Watches	1,193	17,578
Pianos	50	6,830
Manufactured articles		57,481
Merchants' stock		203,271
Manufacturers' stock		99,115
Moneys and credits		536,734
Total		\$1,527,225

We much regret that we cannot furnish your board with a more perfect statement of the agricultural and mechanical position of this county. Our agricultural society was organized in November, 1849: held our first fair Oct. 3 and 4, 1850. Our fair, this fall, was held Oct. 16 and 17; our annual meeting, on the 19th inst. Our present officers are

AMOS SPICKER, President.
DANIEL HINE, Vice President.
N. W. GOODHUE, Secretary.
N. B. STONE, Treasurer.

PETER VOEIS,
ISAAC T. WELTON,
SOLOMON MARKHAM,
THOS. H. GOODWIN,
SAM'L M. COMBS, } Directors.

The amount received for membership this year is	\$235 00
Amount received from county treasury	137 05
Amount received from donations and sale at fair	7 25
Amount received from old lumber	1 25
	\$380 55
Amount paid out for circulars, lumber, &c.	\$24 50
Amount paid out for repairs, ground for fair, &c.	38 50
Amount premiums awarded this year	235 00
	\$297 00
Balance on hand	\$82 45

The annual address was delivered by the Hon. Van R. Humphrey. It was replete with eloquence and good sense, and was listened to with much interest. After which, Mr. F. R. Elliott, of Cleveland, addressed the assembly.

Our society is in a very prosperous condition. Next year we expect to have belonging to the society permanent grounds and buildings. We have three or four hundred dollars already subscribed for that purpose.

N. W. GOODHUE, *Secretary*
Summit Co. Ag. Society.

SUPPLEMENT TO THE SUMMIT COUNTY AGRICULTURAL REPORT OF 1850.

AUDITOR'S OFFICE, SUMMIT CO., O.,
AKRON, March 22, 1851.

To the President of the Board of Agriculture of the State of Ohio:

DEAR SIR:—Our county agricultural society was organized Nov. 28, 1849, by the election of the following officers:

SIMON PERKINS, President.
H. G. WEAVER, Vice President.
W. H. DEWEY, Treasurer.
WM. A. HANFORD, Secretary.

The first agricultural fair of the Summit County Agricultural Society, was held in Akron, on the 3d and 4th days of October, A. D., 1850, at which was paid out of the treasury of the society, for premiums awarded, two hundred and eighty-four dollars; for expenses of fitting up grounds, &c., \$35 50; printing, &c., \$17 50.

The receipts from membership amount to.....	\$190 00
Amount received from county treasury.....	112 80
Amount received from sales at fair	24 18
Amount received from H. G. Weaver, donation.....	2 00
	<hr/>
	\$329 58

The annual meeting of the society was held on the 20th of November, 1851; at which time the following gentlemen were elected officers of the society for the present year, to wit:

SIMON PERKINS, President.
AMOS SEWARD, Vice President.
N. W. GOODHUE, Secretary.
N. B. STONE, Treasurer.

HENRY VAN HYNING,	} Managers.
DANIEL HINE,	
JAMES M. HALE,	
MILO STONE,	
HARVEY BALDWIN,	

N. W. GOODHUE, *Secretary*.

April 1, 1851. The above supplement was this day received by me and carried to the printer, to be inserted in the Agricultural Report. It is therefore inserted in the report for 1851.

W. W. MATHER.

TRUMBULL COUNTY.

PRINCIPAL CROPS.—Wheat, Corn, Oats, Flax, Buckwheat, and Potatoes.

1. **WHEAT.**—The average yield for the season, per acre, is 25 bushels. The wheat crop in this county, for last season and this also, was quite good. This is not a wheat region; and, formerly, the average yield was but 10 or 12 bushels, and the best crops gave only 25 or 30 bushels per acre. Now, through improved tillage, 30 bushels per acre is not considered an extraordinary crop; and as high as 48 bushels have been obtained. Doubtless the crop will be further increased as cultivation improves. Thorough draining is *indispensable* in growing *wheat* here, and an advantage to other crops. Under-ground drains serve an excellent purpose. The blue-stem variety seems best adapted to our climate.

2. **CORN.**—This is the most important crop raised by our farmers; average yield per acre, 35 bushels; with proper care, 80 or 90 bushels can easily be obtained in a good season. This crop and some others were destroyed, in the north-western part of the county, in the last of July, by a hail storm, the stones of which were from the size of a walnut to that of a large hen egg. Corn ground with the cob is considerably used for feeding cows and other cattle.

3. **OATS.**—Crop good—average yield, 30 bushels per acre.

4. **FLAX.**—This crop is of considerable importance to this county; it is cultivated chiefly for the seed, which commands a high price, from \$1 to \$1 12½ per bushel. It is generally sown on sward ground, upon which wheat is sown in the fall subsequent to the crop of flax, frequently with success, although a bad practice undoubtedly.

5. **BUCKWHEAT.**—This, although a common crop, has failed this season.

6. **POTATOES.**—This crop promised well in the fore part of the season, but was attacked by the rot, the last of July, and much injured—not over a fourth of a crop.

The great agricultural business of this county is making cheese—raising cattle also occupies a prominent place. The first is the main source of wealth to our farmers, among whom it is rare to find one who has been long engaged in this employment who is not in affluent circumstances. Formerly the cheese was wholly manufactured by the dairymen; now they are extensively made at cheese factories, that have sprung up within a few years, which buy the curd of the dairymen. Much attention is being paid to raising fine stock. This society has held annual fairs since 1846, and each fair has given encouraging evidence of a rapid improvement in this branch of industry as well as others. Thorough bred Durhams have been introduced more generally throughout the county, giving rise to strife and emulation in that branch of farming.

JUNIUS DANA, *Secretary.*

AGRICULTURAL MEETING.

The Agricultural Society of Trumbull county met at the Court House, in Warren, on Friday, the 21st instant, pursuant to previous notice. John Reeves, jr., a member of the committee on Crops, being absent, Mr. F. Kinsman was appointed to fill the vacancy; after which said committee proceeded to examine the statements of different crops, presented and reported as follows:

Two statements of crops only were submitted, both of corn; although other crops had been entered for premiums, no statements showing the yield of the same were furnished, and could not therefore be considered.

The committee have awarded to Aaron Davis, of Bazetta, for the most profitable two acres of corn, the 1st premium of \$6. To Horatio Bascomb, of Green, for the second most profitable two acres of corn, the second premium of \$3. The crop of Mr. Davis was raised on sward ground and produced $89\frac{1}{2}$ bushels per acre, which, at 40 cents per bushel, gives \$35 70. Less cost of cultivation per acre, \$7 38. Nett profit, \$28 32. Mr. Bascomb's was raised on land previously cultivated, and was manured in the hill. This crop produced $9\frac{1}{2}$ bushels per acre, which, at 40 cents per bushel, gives \$36 60. Less cost of cultivation, \$13 27. Nett profit of Mr. Bascomb's corn per acre, \$23 33.

Mr. Davis's corn, although producing less in quantity, was the more profitable of the two crops, and the committee have therefore given it the first premium, and to Mr. Bascomb's the second.

Mr. M. B. Taylor, late Treasurer, presented his account with the society, showing a balance in his hands of \$197 09.

On motion, J. Dana was appointed to audit the Treasurer's account, who, after examining the vouchers, reported the same correct.

Hon. M. Birchard was appointed delegate to the meeting of the State Board of Agriculture, to be held at Columbus on the third day of December next.

Messrs. F. Kinsman, Harmon Austin, and Chester Bidwell, were appointed a committee to obtain ground for holding future fairs, and to have the same fenced; after which the society adjourned.

HARMON AUSTIN, *President.*

JUNIUS DANA, *Secretary.*

TREASURER'S ACCOUNT.

M. B. TAYLOR, *late Treasurer of the Trumbull County Agricultural Society, in account with the Society:*

DEBITOR.

To cash in treasury, as per statement published Jan. 29, 1851	\$10 98
To cash received from Jan. 29, 1851, to this date, of members, for admission to fair of 1851, and as donations	493 87
To cash of county auditor from State Agricultural Fund	152 45
	<hr/>
	\$657 30

CREDITOR.

By amount paid for premiums and expenses for past year -----	\$460 21
By balance in the treasury, Nov. 21, 1851 -----	197 09
	<hr/>
	<u>\$657 30</u>

M. B. TAYLOR, *Treasurer.*

I have examined the above account and find it correct.

JUNIUS DANA, *Auditing Com.*

TUSCARAWAS COUNTY.

In accordance with the law, and the rules prescribed by the State Board of Agriculture, the President and Secretary of the Tuscarawas County Agricultural Society herewith present a printed list of the premiums offered and awarded at the second annual fair, held at New Philadelphia, on the 16th and 17th days of October, 1851, and also an abstract of the Treasurer's report, as required by law to be published.

The days on which the fair was held being pleasant, a large number of persons attended; and the interest manifested by those present, was such as to induce the belief that, in a few years, Tuscarawas county will stand second to none in the State with regard to the improvement of stock and the products of the soil. It is true there were but few competitors on crops; but we attribute the cause to the fact that our society, being in its infancy, the rules with regard to crops were not generally known (or overlooked,) until the fair. Many have, therefore, failed to present themselves as competitors. The only competitors on crops were Messrs. Isaac Blickensderfer and David Yandt—the first on corn and oats, the latter on corn only. It appears, from the sworn statement presented by Mr. Blickensderfer, that he raised, upon river bottom land, 98 bushels of corn to the acre. He also raised, upon the same kind of land, 90 bushels of oats per acre. Mr. Yandt raised 76 bushels of corn per acre, upon second bottom.

The Horses, Cattle, Sheep and Hogs exhibited, showed a decided improvement over those brought forward last year. Quite a variety of samples of grains, fruits, vegetables, &c., of superior quality, were exhibited. Nor were the ladies amiss in their efforts to make the fair interesting; although the room procured for that purpose was entirely too small, yet it was fitted up with taste, and a great variety of articles were presented, displaying the taste, skill and ingenuity of the fair sex. It embraced much that was substantial and useful, as well as ornamental.

The fair, taken altogether, far exceeded the expectations of the managers, as well as those who attended it. We have no doubt that the public interest is promoted by the institution.

The principal crops raised are Wheat, Corn, Oats and Hay, with small amounts of Rye, Barley, Buckwheat, Clover Seed and Flax Seed.

WHEAT.—The common average of the county is about 15 bushels—this year it is about 20 bushels per acre, and of excellent quality. The rust and fly are the principal causes of failure.

CORN.—The usual average per acre is, on river bottom, about 50 bushels—on upland about 30 bushels. This year the crop is rather light, particularly on upland, and will not average more than 20 bushels per acre. Mostly sold for foreign markets, and commands from 28 to 31 cents per bushel.

OATS.—General yield per acre, 40 bushels. There was a full average crop the present year. Price, from 22 to 31 cents.

GRASS AND HAY.—Usual average yield, 2 tons per acre. Present season, the crop was a little short, owing to drouth—average say 1½ tons.

POTATOES.—The general average of potatoes is about 100 bushels per acre. This year the crop was much below the average, it having in some parts of the county entirely failed, owing to the drouth.

RYE.—But little rye raised—average, about 25 bushels per acre—mostly fed to stock—price 37 to 40 cents.

FRUIT.—Character ordinary—considerable care is being taken to improve it—none exported except in a dry state.

The officers for the present year are—

ELISHA JAMES, President.
JOSEPH SLINGLUFF, Vice President.
JOSEPH WELTY, Treasurer.
JOHN ENGLISH, Secretary.

DAVID JUDY, RICHARD POULSON, WM. HELMICK, JOSEPH BROWN, FLEMMING BEEKY,	}	Managers.
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Report of the Treasurer of the Tuscarawas County Agricultural Society, for the year ending October 16, 1851.

Balance in the treasury last year	\$177 06
Received interest on money loaned.....	6 00
Received of members for fees for the year ending Oct. 16, 1851.....	166 00
Received from county treasury	158 00
	<hr/>
	\$507 06
Paid premiums awarded in cash	\$176 50
Paid premiums awarded in books and periodicals	43 35
Paid expenses for printing.....	23 00
Paid expenses of the fair and for stationery	18 36
	<hr/>
	261 21
	<hr/>
Balance in treasury	\$245 85

JOSEPH WELTY, *Treasurer.*

December 1, 1851.

Being misguided as to the time of the meeting of the State Board, by a notice in the November number of the Ohio Cultivator, that the meeting would take place on the 10th of December, we have been under the necessity of making up this report upon a few hours' notice, and is consequently very incomplete, and by no means such a one as could have been desired.* The statements of competitors on crops, &c., having been mislaid, we are unable to give the modes of tillage, but they will be forwarded hereafter, to be made part of this report.

E. JANES, *President.*

JOHN ENGLISH, *Secretary.*

December 1, 1851.

SUPPLEMENTARY REPORT, JAN. 31, 1852.

Oats Crop raised by Isaac Blickensderfer, 97 bushels on one acre.

The land on which the oats was raised was a wet, marshy pond, through which I cut a ditch in 1848: in the spring of 1850, I plowed it up and planted it in corn, which yielded 65 bushels per acre. Last spring I sowed the same in oats.

* The mistake was made in all the papers in which notice was given, till Nov. 24, when the mistake which was first made in the premium list of 1851 was noticed, and circulars immediately issued to all the county agricultural societies, and a card published in the Columbus papers, with a request to all the papers to notice before the 1st of December. The notice was in time for almost all the societies to send their delegates; but some of the reports were hastily prepared, in consequence of the change of time necessary to comply with the terms of the law.

W. W. MATHER,
Cor. Sec. O. S. Board Ag.

December 4, 1851.

Expense of plowing and harrowing	\$1 75
Two and a half bushels seed oats	75
Cutting and binding	1 00
Mowing and hauling	1 50
Threshing and cleaning	2 50
Hauling to market	1 25
	<hr/>
	\$8 75
Sold 97 bushels, at 20 cents per bushel	19 40

Affirmed and subscribed, this 14th day of October, 1851, before
SAMUEL ROMIG, J. P.

HENRY WOLF,
J. F. BLICKENS DERFER.

Corn Crop raised by Isaac Blickensderfer, from one acre, Ninety-Nine bushels of Shelled Corn.

MODE AND EXPENSE OF CULTURE.

Second bottom land, which was in timothy four years; plowed in February, ten inches deep; harrowed soon after; then put on 18 two horse loads stable manure; harrowed the manure in, and planted the corn near the surface, the 15th of May, 3½ feet by 3½ feet apart, four stalks in a hill. As soon as large enough, went through with the cultivator—soon after again with the same—followed with the hoe, then with the double plow—followed again with the hoe—plowed again with the double plow.

Expense of first plowing	\$1 50
Harrowing	1 00
One day hauling manure, two teams	2 75
Half day spreading manure	37
Marking and planting	1 25
Cultivating and hoeing	1 00
Plowing and hoeing	1 25
Plowing	75
Seed corn	19
Harvesting and cribbing	3 00
	<hr/>
	\$13 06

Affirmed and subscribed, this 14th day of October, 1851, before
SAMUEL ROMIG, J. P.

HENRY WOLF,
J. F. BLICKENS DERFER.

UNION COUNTY.

Agriculture in this county is as yet but imperfectly carried on, but the improvement is visible from year to year, in the interest which is being awakened up through the agency of the Agricultural Society, which was organized May 28, 1847.

WM. B. IRWIN, President, Milford Centre.
E. BURNHAM, V. President, Woodstock.
C. LEE, Treasurer, Marysville.
J. JOHNSON, Secretary, "

Re-elected, June 27, 1848, same officers.

Re-elected, August 18, 1849, same officers.

Elected, June 22d, 1850,

JOSHUA JUDY, President, Marysville.
E. BURNHAM, V. President, Woodstock.
C. LEE, Treasurer, Marysville.
J. JOHNSON, Secretary, "

Re-elected, June 21, 1851, same officers.

No escheated lands.

Amount of funds in Treasury of Union county, for State Agricultural Society, \$28 50.

The Board knows of no improvements in agriculture, that can now be specifically named.

The committee on crops made the following awards, approved by the Board :

To David Reyner, best acre of corn, 125½ bushels.....	\$5 00
To Jas. C. Miller, 2d best "	3 00
" " best ¼ acre potatoes, 43½ bushels.....	3 00

Treasurer's Report.

Balance on hand, Nov. 30, 1850.....	\$108 80
Received of members of Society.....	92 00
Received of county treasurer.....	61 62
	<hr/>
	\$261 82
Orders redeemed.....	182 42
	<hr/>
Balance, Nov. 20, 1851.....	\$79 40

C. LEE.

Sworn to and subscribed before me this 22d day of November, A. D., 1851.

WM. H. FRANK,

Mayor of the town of Marysville, Ohio.

The number of members belonging to the Society, is 175. The amount offered in premiums, \$237 50. The amount awarded, \$194 50.

JOHN JOHNSON, *Secretary.*

VINTON COUNTY.

McARTHUR, *December 13, 1851.*

W. W. MATHER, *Cor. Sec. O. S. B. Ag. :*

Upon the receipt of the Circular of the President of your Board, and at your suggestion, we immediately gave notice for the formation of an Agricultural Society. We held our meeting to-day, and notwithstanding the inclemency of the weather, we had a full and spirited meeting. I have not seen so much interest manifested by all our citizens, in any measure, for many years. We obtained fifty members in a very short time, adopted a constitution and by-laws, and organized by the election of

JOS. KALER, President.
JOHN ROBBINS, V. President.
DR. A. WOLF, Treasurer.
L. BORT, Rec. Secretary.
E. F. BINGHAM, Cor. Secretary.

Dr. WILCOX,	} Managers.
THOS. RANNELLS,	
WILLIAM WILSON,	
L. S. PAINE,	
A. W. BOTHWELL,	

Our first annual Fair is to be held the 1st Wednesday in October next. From the spirit and interest manifested to-day, you will hear a flattering account of our doings on that day.

Ten dollars, in our county treasury, are due the State Board, from show license.

We have not been organized long enough as a county, to have any escheated lands that have come to the knowledge of our county officers.

I have not a very flattering account to give of the condition of agriculture in our county. Our distance to market for grain is so great, our farmers have but little to encourage them beyond a supply for home consumption, and our lands, beyond what is necessary for this purpose, are devoted to meadow and pasture or grazing

land for cattle; and for this purpose, they are in quite a good state of cultivation.

Our native blue grass is beginning to be highly prized by our graziers. It is quite equal to the Kentucky blue grass for grazing purposes, and to appearances, is in all respects similar to it. For our meadows, we cultivate mostly the red top, or herd grass. We find it well suited to our soil, and although not quite so productive on our dry and rolling lands, yet it is much better suited to large operations in hay. It will remain fresh and green for many weeks after the seed is ripe, the stalk dying but a few inches below the seed, and if a drouth does not come on, it will thicken up with new stalks and blades till the close of hay harvest, which continues some years until the first of Sept. We commence cutting our timothy and clover as soon as the seed is well formed, and hurry it off as soon as possible.

When our soil becomes reduced so as not to produce a profitable crop of grain, it is turned into grass, and a crop of grass permitted to grow, using it only for early pasture a month or so in the spring, and then it is permitted to grow the balance of the season, so as at all times to keep the ground shaded. This is a very cheap and effectual way of improving the soil. Manure has an excellent effect on most of our lands, but as our cattle are usually fed on the meadows where the hay is stacked at the time of cutting, we have but small quantities of it to use; but our meadows are much improved by this mode of feeding. Our grazing land is not grazed short, grass at all times being left sufficient to keep the sun from the soil. Grazing land treated in this way will improve. Some of our farmers are doing a good little business with wheat and clover, and thus improving the soil; and could do a good business on a large scale, if convenient to market.

Briars and iron weeds are the most troublesome plants we have to contend with. Briars are easily killed by mowing close in June and in the early part of September, for two or three years. The only effectual mode of ridding the soil of iron weed, is to grub deep enough to take out the bulb of the root from which the stalks and fibrous roots proceed. Cutting them with a sharp hoe, a little beneath the surface of the soil, late in the fall season, so as to leave the root a little exposed to the frost of winter, will kill the most of them.

Buck plantain, or "riffle grass," as the Scotchlanders call it, has made fearful inroads on some of our grazing farms, and bids fair to overrun all our farms. We have been disappointed in all our attempts, thus far, to destroy it. It appears to be a connecting link between the different species of grass and other plants. The leaves are long and narrow; the stalks, when in bloom, look like timothy stalks stripped of their blades. The stalk bearing the seed dies soon after the seed is ripe, but the leaves remain green all winter, unhurt by the frost. It has a small, hard, tapering root, with small fibres passing off in every direction. If in digging it up, you leave the smallest part of the root, or of its fibres, in the ground, they will in a few days send forth new plants. It is so prolific in seed, that if you plow

the ground, you only prepare it for a new crop. It will crowd out and smother almost all other grasses, except in wet soil. Our cattle will not eat it.

The grub worm is the only insect that has proved troublesome to our meadows or grazing land. When we discover the grass beginning to die in spots, we know the grub worm is beginning in it. If in pasture, we turn our hogs in immediately. If in our meadows, we wait till after mowing time. The hogs will pretty effectually destroy them.

Yours, very truly,

DAVID JONES.

WARREN COUNTY.

BY EZRA CARPENTER.

PRINCIPAL CROPS.—Wheat, corn, oats, barley, tobacco and potatoes.

WHEAT.—The crop this year is generally thin on the ground; well filled; quality good. About the same number of acres raised this year as last—25,990. From the best information we can obtain from those in different parts of the county, who have threshed their crops, and from those who follow threshing with machines, and are paid by the bushel, the present crop will yield 14 bushels per acre, making 363,860 bushels. The low price of the article, and the extreme drouth at seeding time, will lessen the amount put in this fall, probably one fourth. Many varieties are sown. Early maturing kinds are sought after on account of the rust. It has been clearly demonstrated by actual experiment, that our soil is capable of producing about double the number of bushels per acre, if properly put in. There are very few of the wheat raisers in this county, who think of plowing the ground more than once, sowing the seed broad-cast, merely scratching it in by passing the harrow over it once. As for manure, or green crops turned under, they never dream of them.

CORN.—A full average crop. The general opinion is, it will go over fifty bushels per acre, assuming fifty bushels as the average. The high price of this grain for the last two years, has somewhat increased the number of acres cultivated, over last year. The assessors returned 42,322 acres. Assuming 45,000 acres this year, at 50 bushels per acre, will give 2,250,000 bushels; at the present market price, at the railroad and canal, 25 cents per bushel, it will amount to \$562,500. Many experiments are tried in raising this crop. Some of the details will be given by the experimenters themselves, in the report to our Agricultural Society.

OATS.—The average crop, 25 bushels per acre. An average crop raised this year.

RYE.—But little grown for the grain. Some of our farmers sow rye in their corn, the last time plowing, for winter pasture, which pays well; very fine for young cattle and sheep. There are other advantages in seeding corn fields for pasture. It prevents the growth of weeds and burs in fields that have been long cultivated, and have become foul, which exhaust the land more than the pasture. If the stock is taken off a short time before plowing in the spring, it makes a fine green crop for turning under as manure.

BARLEY.—A considerable amount is raised. We have no means of ascertaining the amount. Usual average, 35 bushels per acre.

GRASS AND HAY.—The average crop of hay is $1\frac{1}{2}$ tons per acre. Timothy, clover and red top mostly cultivated. Blue grass used for woodland pastures. Orchard grass is cultivated to some extent for wood land pasture, which is more productive than blue grass. It will bear heavier stocking; springs up as soon as clover, when fed off; stands the frosts of winter; stock is remarkably fond of it, when young and tender. The best time to seed woods pastures with it, is in August. Sow plenty of seed, and it will come without anything farther being done to it.

ROOT CROPS.—Potatoes are the only roots raised, except for culinary purposes. Irish and sweet potatoes are raised to some extent for market. The crop this year is generally of good quality, excellent. No complaint of disease.

FLAX.—Is raised for the seed. We have no data as to the amount; usual yield 10 bushels per acre. The lint, after the seed is threshed off, is hauled to the paper mills and sold for \$4 per ton.

SEEDS.—Clover and timothy are raised some more than is needed for home consumption.

SHEEP.—This is not a wool-growing county. The assessors' returns show a decrease since 1848, of 7,731. This decrease is owing to various causes, chiefly the demand for mutton—sheep for slaughtering and rendering, for the pelts and tallow. There are few large flocks kept in this county. We have all kinds and grades. The majestic Leicester, the vigorous, hardy Southdowns, heavy wooled Merinoes, fine wooled Saxony, with all their grades, down to the long legged, long tailed, bare-bellied, free commoner, that can clear a ten rail fence with ease, who have to make their own living in the high-ways and by-ways, and are common trespassers in the neighborhood. But I am happy to say they are fast disappearing. There is a disposition amongst most of our farmers to keep such as shall pay the best for their keeping. There is a rapid improvement of the various kinds bred, in those that are kept for the wool—also, mutton. The best clips of fine wool were sold this year for from 40 to 50 cents per pound; coarse, from 30 to 40, washed on the sheep's back. The average weight of fleece will probably be $3\frac{1}{2}$ lbs. 21,858 head.

PORK.—The number of hogs returned by the assessors this year, is 28,305, showing a falling off since 1849, of 16,412 head. This may be accounted for in the relative value of pork and corn. The distilleries use the corn, which also creates a demand for stock hogs, for slopping. All the stock hogs that can be had are driven out of the county in December and January. The facilities for getting the raw material to market, has its effect in reducing the number of hogs. The quality of the stock is not degenerating. Much pains is taken by many of our hog raisers to improve the stock, by crossing and importations.

BEEF.—The number of cattle is slowly increasing. The returns for this year are 12,340. There are probably about 5,000 annually taken from the county, for beef, grazing, &c. As this is a grain growing county, the number of cattle annually raised is large, in proportion to the number returned for taxation. Breeding cows being the principal stock, most of the good feeding young steers are bought up at yearlings by the graziers. There is a marked improvement in the cattle of this county. Many of our farmers who insisted that the short-horns were all a humbug—that it was all in the feed—have had to knock under, from the fact that the grazer and killer will give their neighbors \$15 per head for yearling steers, when their scrubs would only command from \$7 to \$10, and frequently refused at any price. The short-horns still maintain their well deserved character of paying better, for the food consumed, both for beef and milk, than any other breed. The matter is fully demonstrated, that these two leading qualities may be combined in the same animal by the proper selections of males from known milking families; also possessing the feeding qualities.

HORSES.—8,313 returned for taxation this year. The stock of horses is improving. The high price of this animal has induced many of our enterprising farmers to spare no pains in improving their stock, as it pays well for the trouble and expense. Strangers who attended our exhibition speak highly of the blood and bottom of our horses. The animal was well represented, from the blooded entire horse down to the colt following its dam, as will be shown in our proceedings of the exhibition.

MULES.—Very few raised in this county.

IMPLEMENTS.—There is a gradual improvement in the agricultural implements in use in this county. More perceptible since the organization of our Agricultural Society, in plows, harrows, cultivators, field rollers, threshing machines, reaping machines, and other implements in use. Labor-saving machines, and those that will do the work better than the old method, is what the majority are seeking for. Nothing new to report.

FRUIT.—Of our county is improving. Apples of choice varieties, in fruitful seasons, are abundant. Many are marketed at Cincinnati. The peach, of improved kinds has been cultivated for some years, with a view for market at Cincinnati, and the towns north, by railroad. There are now hardly any fruit trees planted but what are of choice kinds. Cherries, of the choicest varieties, do not succeed as

well with us as in some other parts of the State. By trenching 3 feet deep, from 4 to 6 feet in width, incorporating the earth thrown from the ditch with leaf mould, rotten wood, chip manure, some well rotted cow manure, filling the trench, planting the trees in a row along the trench, will secure a vigorous and thrifty growth. Give some outlet to the trench for drainage, on retentive, stiff clay soil; this will pay well for the trouble. Grapes, raspberries, and strawberries, are cultivated for table use, and do well. Plums, nectarines and apricots are generally destroyed by the curculio.

TOBACCO.—From information from different parts of the county there are from actual knowledge, 375 acres cultivated in tobacco. There may be quite enough not reported to make 400 acres. Many are anticipating from 1,500 to 2,000 lbs. per acre, while many think the average will be 1,500 lbs. per acre. One of my correspondents puts down the average at 800 lbs., when stripped and hauled, ready for packing, and the average cost of cultivation, including seed plants, at \$25 per acre. 800 pounds is the usual average of the celebrated seed leaf raised on the Connecticut river, which kind is undoubtedly the most profitable, on account of the high price. It is used for cigars, preferable to the half Spanish.

Report of the Warren County Agricultural Society.

The Warren County Agricultural Society was organized Dec. 1, 1849. After adopting a constitution, the following officers were elected for the ensuing year:

EZRA CARPENTER, President.
ISAAC EVANS, V. President.
WM. R. CATTELL, Secretary.
WM. EULASS, Treasurer.

JOHN A. DODDS, delegate to attend a meeting of the State Board of Agriculture, at Columbus.

On account of the death of Isaac Evans, E. Wilson was elected Vice President, to fill the vacancy.

The first Saturday in January, 1850, the Society met, agreeable to the constitution, to elect officers for the ensuing year:

EZRA CARPENTER, President.
E. WILSON, Vice President.
WM. R. CATTELL, Secretary.
J. M. STOKES, Treasurer.

JOHN A. DODDS, delegate to attend the meeting of the State Board, at Columbus.

By due notice being given, the constitution was so amended as to elect the officers on the last day of the annual Fair. The Society met on the 10th of September, 1851, and elected the following officers for the ensuing year:

EZRA CARPENTER, President, Clarksville, Clinton Co.
 EDWARD WILSON, Vice President, Deerfield.
 J. P. GILCHRIST, Secretary, Lebanon.
 G. W. STOKES, Treasurer, Lebanon.

JACOB EGBERT, Lebanon, Dr. WM. B. STROUT, Rochester, WM. R. CATTELL, Lebanon, MOSES KELLEY, Waynesville, JOHN BONE, Lebanon,	}	Managers.
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JOSEPH ANDERSON, Esq., is our delegate to attend a meeting of the State Board of Agriculture, at Columbus, Dec. 3d, 1851.

Agricultural fund on hand, \$40.

No escheated lands.

EZRA CARPENTER, *President.*

Nov. 29th, 1851.

The second annual Fair of the Warren County Agricultural Society was held near Lebanon, on Tuesday and Wednesday, September 10th and 11th, 1851.

In most departments, the exhibition excelled, both in quantity and quality, that of the previous year. The severe frosts of spring destroyed most of our fruit, and detracted much from the variety and excellence of that department; and the extreme drouth and heat prevailing at the time of our exhibition, kept away many cattle and sheep which would otherwise have been on the grounds. The show of horses was very numerous and superior, and the several departments of farm implements, and domestic manufactures, were very creditable to the exhibitors. The Floral display was very beautiful, and the ladies honored and enriched us with a handsome donation, the proceeds of bouquets sold on the ground.

The attendance and interest manifested was quite equal to that of the previous year, and we felt so much encouraged as to the perpetuity of our Society, that immediately after the exhibition, we leased for the term of eight years, about fifteen acres of ground, very eligibly situated, a part of which we hope to be able to enclose, and otherwise suitably prepare for the next annual exhibition.

For a detailed statement of our proceedings, awards, &c., we refer you to the accompanying paper, showing the premiums offered and awarded by our Society the present year.

Those who entered for premiums on field crops, have none of them as yet presented to the Secretary or Committee the requisite vouchers and statements, which we much regret, as we believe some of them produced very large crops, by means of thorough and skilful preparation and tillage.

A misapprehension as to the time of the annual meeting of your Board, also prevented us from presenting a report as to reclaimed land, and must also account for a part of the imperfection of this report and accompanying papers.

*Exhibit of the receipts and expenditures of the Treasurer of the Warren County, Ohio,
Agricultural Society, A. D., 1851.*

	Dr.		Cr.
To amount received of William Eulass, former Treasurer of said Society, for 1850.....	\$131 81	To amount paid for premiums and other expenses.....	\$181 42
To amount received from Treasurer of Warren county, Ohio, for said Society, for A. D. 1851.....	127 80	Balance in the hands of Treasurer of said Society, up to this date..	259 19
To amount received of 181 members, \$1 each.....	181 00		
	<u>\$440 61</u>		<u>\$440 61</u>
		Outstanding orders yet to be paid for the present year, say \$140 00.	
		G. W. STOKES,	
		<i>Treasurer Warren Co. Ag. Society.</i>	

Nov. 29, 1851.

WASHINGTON COUNTY.

The Washington County Agricultural Society would report that there has been no change in the principal products since the last report.

The wheat crop this year was very large, and the berry excellent. The Mediterranean is most generally grown on bottom lands, but other varieties are preferred by our millers for making extra family flour. The price ranges from 55 to 60 per bushel.

The corn crop was very light, owing to excessive rains in the spring, and drouth during the summer and early fall. The price of *nubbins*, for there is little corn, is 83 cents per bushel.

There was a large crop of oats, which finds a ready market and commands a fair price, owing to the scarcity of corn and hay.

There was little fruit this year; none for export; not enough for home supply. By means of the telegraph and railroad, the ambassadors between *want* and *supply*, we are receiving some from Western New York, via Cincinnati. Last year this county raised 50,000 bushels of apples, now we receive them from abroad.

Our manufactories of various kinds are in a flourishing condition. The Agricultural Society is having an influence on the farming interests of the county. The

stock exhibited at our annual fairs, each year, increases in quantity, and is superior in quality. Greater improvement is seen in sheep and swine than in horses and cattle; but an *organized* effort is now being made to improve the latter.

Our farmers are awakening to the importance of a more thorough cultivation of the soil, and, as expressed by another, "are *learning* that which lawyers have *known* for centuries, that he who buys land, buys all, from the height above to the depth beneath, and is not confined to four or five inches of the surface."

No one can be a good farmer, or know the power and virtue of his land, unless he plows deep, and brings forth the hidden virtue of his soil. Every farmer should have continually before him the *golden key of the husbandman*, "*plow deep! plow deep!*" then he may expect a rich and golden harvest, and gold in abundance as the reward of his labors.

Respectfully submitted,

WM. S. WARD, *Secretary*.

[Communications for the Society will be sooner received if addressed to the Secretary at Marietta.

Officers of the Washington County Agricultural Society, organized June 24, 1846.

1846 { JOSEPH BARKER, President, Newport.
J. DUNNING, Vice President, Watertown.
R. CRAWFORD, Treasurer, Marietta.
W. R. PUTNAM, JR., Sec., do.

1846-7 { GEORGE DANA, President, Belpre.
W. R. PUTNAM, JR., V. P., Marietta.
D. E. GARDNER, Treasurer, do.
L. BARKER, Secretary, Harmar.

1847-8 { JOSEPH BARKER, President, Newport.
W. R. PUTNAM, JR., V. P., Marietta.
A. S. GUITTEAU, Treasurer, do.
D. E. GARDNER, Secretary, do.

1848-9 { W. R. PUTNAM, JR., Pres't, Marietta.
W. P. CUTLER, V. Pres., Constitution.
A. L. GUITTEAU, Treasurer, Marietta.
BEMAN GATES, Secretary, do.

1849-50 { G. W. BARKER, Pres't, Marietta.
H. FEARING, V. Pres., Harmar.
BEMAN GATES, Secretary, Marietta.
A. L. GUITTEAU, Treas'r, do.

1850-1 { WILLIAM DEVAL, President, Marietta.
E. T. HAYWARD, V. Pres't, Waterford.
W. S. WARD, Secretary, Marietta.
W. B. THOMAS, Treas., do.

1851-2 { S. WOODFORD, President, Watertown.
 W. DEVAL, V. President, Marietta.
 W. S. WARD, Secretary, do.
 W. B. THOMAS, Treas'r, do.

BEMAN GATES, Marietta,
 G. H. RICHARDS, do.
 L. SOYER, do.
 L. J. P. PUTNAM, do.
 J. PALMER, Brown's Mills,
 E. O'NEIL, Newport,
 W. W. BATHBONE, Belpre, } Managers.

Treasurer's Report, 1851.

Oct. 12, 1850.	Amount cash rec'd from A. L. Guitteau, former treas....	\$166 32	
"	paid premium and expenses.....	82 75	
		<hr/>	\$83 57
	Cash received from county.....		100 00
			<hr/>
			\$183 57
Nov. 17, 1851.	Cash received from auction sales.....	\$53 16	
	Cash received for sale of tickets.....	125 00	
	Cash received at the door.....	36 43	
		<hr/>	\$214 59
	Cash paid for sundries, fruit, &c.....	\$45 26	
	Cash paid drayage, building pens, &c.....	6 25	
	Cash paid premiums.....	129 62	
		<hr/>	\$181 13
			<hr/>
			33 46
	Balance on hand.....		<hr/>
			\$217 03

There are no escheated lands in this county. Amount, State Board entitled to from shows during past year, \$40.

Report on Crops.

To the Washington County Agricultural Society:

The following report is respectfully submitted by the committee on crops :

WHEAT.

Although the season has been favorable for the production of this crop, there are but two persons who have presented statements and specimens of their crop.

The first premium on bottom land is awarded to "Cleona Farm," for a crop of

fifty-three (53) bushels Mediterranean, raised on one and nine-twentieths ($1\frac{9}{20}$) acres—equal to $36\frac{3}{4}$ bushels to the acre.

Mode of Culture.

The $1\frac{9}{20}$ acres, on which the above wheat was raised, was a piece of ground on which apple trees were set out three years since, and planted in potatoes, one-half the ground being manured with barnyard manure, and one-half with bone dust, one table-spoonfull to each hill of potatoes. The dust did not unite with the soil the first year, and no advantage to the potatoes was noticed. Last year it was planted in potatoes again, being manured first. It was then plowed and sowed on the 6th of November last, in wheat. Two bushels of seed on the $1\frac{9}{20}$ of an acre and 99 dozen of wheat cut on it, and threshed by machine in October.

WM. S. WARD,
JOSEPH W. PLUMLY.

October 29, 1851.

The first premium on wheat, on hill land, is awarded to Jas. Dutton, of Aurelius township, for a crop of thirty-three (33) bushels raised on one acre. The mode of cultivation was as follows: The ground was broken up in August, plowed again in October, sown and harrowed. Variety—red chaff.

We regret that the statements made by persons presenting crops are not more full and accurate. Of what benefit is it to the society unless they know the mode of culture, quality of seed, kind of soil, the previous crops raised, the quantity of manure used, the quality of soil, &c.

BUCKWHEAT.

There was but one lot presented to compete for the premium. The first premium is awarded to O. Shepard, of Rainbow, Union township, for a crop of 15 bushels and one peck per half acre—equal to $30\frac{1}{2}$ bushels per acre. Land—creek bottom; had been in corn several years, was broken up in April, plowed again the first of July, and sown with one-half bushel of seed per acre, harrowed and cross-harrowed.

UNION TOWNSHIP, WASHINGTON COUNTY, O.

To the Secretary of the Washington County Agricultural Society:

SIR:—I have this year raised a crop of buckwheat, which I propose to offer in competition for a premium. I have had one-half acre of my field measured, and it produced fifteen bushels and one peck of good sound buckwheat, such as the sample herewith presented. The land was creek bottom, had been in corn for sev-

eral years, was plowed in April, plowed again the first of July, and sowed with half bushel of seed to the acre, and harrowed twice.

C. SHEPARD.*

Rainbow, October 28, 1851.

STOCK-BUCKWHEAT.

The committee recommend a premium of \$1 00 to be awarded to Mr. Bailey for his exhibition of stock-buckwheat, accompanied by the following statement :

Stock-Buckwheat.

Sown on clay soil, five gallons per acre, in April ; cut in July, then harrow the stubble well for a second crop. Said wheat will produce from 80 to 100 bushels per acre each crop, and is admirably adapted to feed for stock. This lot of one bushel was raised from one-half pint of seed, sown on less than three square rods of ground.

POTATOES.

Entered by B. Shaw. The first premium is awarded to A. McClure and W. Laughery, of the J. W. Dana farm, for a crop of $61\frac{1}{2}$ bushels on $\frac{1}{4}$ acre ; equal to 246 bushels per acre. Variety—Peach Blow, or Merchant potato. Culture—land plowed eight inches deep, here's the secret, planted three feet apart, and in the old of the moon in April. The moon part of the statement we don't care much about, but the deep plowing is worthy of notice.

The second premium is awarded to "Cleona Farm," for a crop of $58\frac{1}{2}$ bushels, raised on one-fourth of an acre—equal to 234 bushels per acre. Land—bottom, (river). Variety—Peach Blow.

Culture.

The field in which the first above mentioned crops of potatoes was raised was old meadow, turned over last winter, and planted in the old of the moon, in April, in rows 15 inches by 3 feet. When up, the ground was harrowed with a large harrow, plowed twice, giving but little hill, only stirring the ground, hoed once, then kept them clean of weeds as possible. No rot among them.

The second piece was worked in the same manner, only plowed up the year before. This yield is not large for ordinary years ; but, considering the dry weather, is a better yield than our neighbors around us were favored with. We only hope that some other parts of the county can show a better yield.

JOSEPH W. PLUMLY,
WM. S. WARD.

October 30, 1851.

CORN:

Entered by B. Shaw. The first premium on bottom land is awarded to McClure and Laughery for a crop of 112 bushels and 17 pounds of shelled corn to the acre.

Method of Culture.

Land plowed on the 15th of May, 7 inches deep; planted $3\frac{1}{2}$ feet apart, each way; an average of $3\frac{1}{2}$ stalks to the hill; worked out with a two horse harrow; followed with the hoe; plowed four times afterwards with the small plow. Variety—yellow, small cob.

The first premium on upland is awarded to Wm. Pitt Putnam, of Belpre, for a crop of $82\frac{1}{2}$ bushels, raised on one acre. Variety: large yellow.

Taking into consideration the extremely dry weather we have had the past season, the above crops are good. We know that if Smith's double plow was used, followed by the sub-soil plow, thus plowing 14 inches deep, a crop of 125 bushels of corn can be raised every season that is as dry as the past one has been.

Deep plowing will prevent the drouth from injuring crops; it will also prevent the drowning out of crops by heavy rains, for it gives the water a chance to escape.

TIMOTHY SEED.

The first premium is awarded to Wm. Pitt Putnam, for a crop of 30 bushels, grown on 5 acres and 39 rods of land. It is the opinion of Mr. Putnam that fully one-half of the above amount was grown on 2 acres, which would be equal to $7\frac{1}{2}$ bushels per acre.

VEGETABLES.

The committee recommend a premium of \$1 00, to be awarded to J. M. Hanover, for a superior lot of cabbage.

His mode of cultivation is as follows: Sow the seed in good ground; let the plants stand until the roots are from 5 to 8 inches long; then transplant them; set them deep—deep enough to leave the heart only of the plant above ground. By so doing you will prevent the drouth from destroying the plant. If the weather be dry: time of transplanting, make a hole in the ground 8 or 10 inches deep; put in your plant and pour it full of water, thus washing the roots downwards. Water the plant every night as long as the weather is dry. Sprinkle salt over the plant once a week. We suppose this is to keep off the insect that destroys the cabbage.

W. W. RATHBONE, *Chairman.*

The proper certificates in regard to measuring and quantity of ground, were given when premiums were awarded.

WM. S. WARD, *Sec. Ag. Sec.*

WAYNE COUNTY.

Second Annual Report of the Wayne County Agricultural Society.

To the President of the Ohio State Board of Agriculture :

The Board of managers of the Wayne County Agricultural Society respectfully report :

That the second annual fair of this society was held at Wooster, Oct. 7 and 8, 1851, in a beautiful grove adjacent to town, where suitable and commodious buildings, sheds, pens, fixtures, &c., had previously been erected. The weather was remarkably fine, and the number in attendance is variously estimated from six to ten thousand people.

That the late fair of this society, compared with the previous fair, shows a greater amount of interest ; that rapid improvements are being made in every department of agriculture and mechanic arts in our county.

That a spirit of improvement is awakened throughout the county, there can be no doubt, and the citizens generally see and feel the advantages resulting from a well organized and well sustained agricultural society. This feeling is not confined to members of the society ; others having caught the spirit of improvement are acting upon these convictions. We have no fears of the success of this society, or the influence that will be exerted on our county generally.

The exhibition of stock, implements, machines, domestic manufactures, mechanic arts, farm products, fancy articles, &c., at our late fair, in number, quality and variety, far surpassed the previous fair. The number of entries exceeded five hundred. Over 300 head of stock were exhibited, of superior quality, exclusive of working cattle ; 30 entries of poultry—over 100 fowls ; 32 entries of grain and flour ; 27 fruit ; 50 vegetables ; 80 mechanic arts ; of domestic manufactures, dairy products, fancy articles, &c., a fine display, for which the ladies deserve much praise.

This society has not yet succeeded in creating that spirit of competition in the best cultivated farms and field crops that is desirable. The probability is, our farmers are aware of the fact that they *all* have well improved farms, and that *all* have been greatly blest with abundant wheat crops the last two years, and therefore conclude there is no room for competition ; however this may be, it is to be hoped that at the next fair of the society there will be a large list of competitors in these important branches.

The show of grain, flour and seed, was remarkably good—we had twenty competitors for the premiums on wheat alone, mostly of the white blue-stem variety, which is highly esteemed with us—usually weighs from 64 to 65 lbs., and the yield per acre is generally better than most other varieties.

The plowing match was well attended, and much interest manifested. Twelve men and boys entered for the premiums. The plowing was well and systematically done. The two first premiums were awarded to father and son, using the Wayne county plow.

Our society now numbers over 300 members ; 294 have paid their annual fee of one dollar each, and about \$60 was received from the citizens of the place, to meet incidental expenses of the fair. Measures are about being adopted to procure grounds for a permanent location which will probably be enclosed, and suitable buildings erected thereon prior to holding of the next fair.

Amount of premiums offered at our late fair was \$567. Amount awarded \$339 50, in money, and 160 diplomas, at a cost of \$32, making in all \$371 50.

The annual election of this society was held at the court house, in Wooster, Saturday, November 29, 1851, at which time the following officers were chosen for the ensuing year :

THOMAS REED, President, Dalton P. O.
DAVID ROBISON, Vice Pres't., Wooster P. O.
JAMES JOHNSON, Secretary, " "
LUCAS FLATTERY, Treasurer, " "

JOHN MCFARLAND, Baughman tp. }
JAMES KEYS, Clinton " }
HARVEY WOODS, Chippewa " } Managers.
HUGH FUNK, Plain " }
R. B. STIBBS, Wooster. }

James Johnson was appointed the delegate from this society to attend the annual meeting of the Ohio State Board of Agriculture, at Columbus, Dec. 3d, 1851.

Respectfully submitted,

JAMES JOHNSON, Sec. *Wayne Co. Ag. Soc.*

Abstract of Treasurer's Report.

Balance in Treasury for 1850	\$100 44
Amount received of members	302 00
Amount received from County Treasurer.....	165 00
Amount of contributions.....	87 50
	<hr/>
	\$624 94
Amount of premiums and expenses.....	511 57
	<hr/>
Balance remaining in the Treasury.....	<u>\$113 37</u>

This society was organized Dec. 1st, 1849, at which time the following officers were elected :

THOMAS REED, President, Dalton P. O.
ISAAC JOHNSON, Vice Pres't, Wooster P. O.
JAMES JOHNSON, Secretary, " "
LUCAS FLATTERY, Treasurer. " "

The same gentlemen were re-elected Oct. 11th, 1850.

The amount collected in this county for the State agricultural fund is \$40. No escheated lands in this county.

WOOD COUNTY.

Annual Report of the Wood County Agricultural Society to the Board of Agriculture of the State of Ohio.

Our society was organized June 9, 1851. We immediately made out a scale of premiums to be awarded at our first fair, and published the same in hand bill form; also in the county paper.

Our first annual fair was held at Bowling Green, on Wednesday and Thursday, the 15th and 16th days of October. It was every thing that we anticipated, and in many respects much more. The number of persons present was large, and we must say the various departments of industry were well represented. A number of very fine horses were exhibited; also some good specimens of Durham and Devonshire Bulls, &c., &c. The show of corn, wheat and garden vegetables was fair; also, for the season, a good display of fruit.

This year our membership has numbered ninety-three. We think that we can do much better the coming year, if proper efforts are made.

The president of our society not being able to attend the Convention, we have appointed James Murry, Esq.

The officers of our society are:

JOHN McMAHAN, President.
W. R. PECK, Vice President.
ELIJAH ELLIOT, Secretary.
GEO. POWERS, Corresponding Sec.
JOHN BATES, Treasurer,

DAVID LADD, BENJAMIN OLNEY, JOHN GROVES, EDWIN GORTON, COLLISTER HASKINS.	}	Managers.
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All of which is respectfully submitted.

WM. R. PECK, Vice President:

ELIJAH ELLIOT, Secretary.

Wood County, December 1, 1851.

An Exhibit of the Receipts and Expenditures of the Wood County Agricultural Society for 1851.

TREASURER, DR.

To amount received from annual subscription	\$93 00
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CONTRA.

By amount paid for printing.....	\$15 50
By amount paid for diplomas.....	8 00
By amount paid for books.....	61 48
By amount paid for premiums in part to this date.....	8 00
	<hr/>
	\$92 98
	<hr/>

JOHN BATES, Treasurer.

MIDDLETON TOWNSHIP,

October 15, 1851.

To the President of the Wood County Agricultural Society :

STATISTICAL REPORT OF MIDDLETON TOWNSHIP.

	BUSHELS.	ACRES.
Wheat.....	2,664	100
Corn.....	18,708	410
Oats.....	7,480	268
Buckwheat.....	1,350	103
Hay.....	492 tons.	329
Potatoes.....	705 "	329
Roots.....	705 "	320

The above is as fair an estimate as we have the means of ascertaining: Very little can be said with regard to the mode of agricultural pursuit throughout the township—the system of ploughing and dragging common to new countries, is practiced here.

The benefits of ditching and draining has been experienced to a considerable extent; but draining, although carried on to a considerable extent, and with some spirit, we consider is yet in its infancy.

With regard to stock, we have, at present, no means of ascertaining correctly the number raised in the township. They are all of ordinary description, or nearly so.

Although little can be said of the mode of cultivation, of draining or stock, we are fully alive to the benefit of improved methods, and while deep ploughing and draining is the order of the day, we look forward to better means, and a better state of things.

PATRICK McISAAC,
HENRY SARVIS,
DAVID WHITNEY,
Committee of Middleton Tp.

FREEDOM TOWNSHIP,

October 15, 1851.

WHEAT.—I took ten of about the average farmers of said township, who raised in the aggregate 100 acres of wheat, yielding 2,800 bushels, making 28 bushels per acre, which is about an average for this year.

CORN.—12 farmers, 3,960 bush. on 103 acres, making $38\frac{44}{103}$ bushels per acre, about an average for this year—season wet and corn light—best lot of 20 acres yields 50 bushels per acre.

RYE.—But little raised this year.

OATS.—9 farmers, on 60 acres, raised 2,000 bushels, making $33\frac{1}{3}$ bushels per acre, about an average.

BUCKWHEAT.—Very light and but little raised.

POTATOES.—Mostly destroyed by the rot.

SWEET POTATOES.—Mr. John Eisenhour raised 12 bushels on 7 rods of ground, which would be about 275 bushels per acre.

No other seeds of any account raised.

DAIRY.—Not much done ; about 1,000 lbs. butter sold from 8 to $12\frac{1}{2}$ cents per lb.

STOCK SOLD.—Horses, \$550 worth ; cattle, \$350 worth ; hogs \$125 worth 19 sheep, \$43 worth.

Twelve of the above sheep sold for \$32 00.

MILLS IN OPERATION.—Two grist mills ; 3 saw-mills ; 1 saw-mill in course of construction or erection.

MECHANICAL TRADES FOLLOWED.—Fanning-mill shops, 2 ; Blacksmith shop, 1 ; turning shop, 1, by water power ; coopers shop, 1 ; carpenters and joiners shops, 4 ; cabinet shop, 1 ; wagon shops, 2 ; shingle factory, 1.

School houses 4—in course of erection, one.

REMARKS.—The water power of Freedom township is better than any interior township in the county, there being a sufficient fall and water for about 8 months in each year, to drive any quantity of mills or machinery.

There have been no experiments tried the past year, in raising farm crops ; crop generally from the natural soil. We have a great variety of soil ; sandy, black sandy clay, and black muck ; rolling and level, dry and wet. Perrysburg is our chief market, and products sell at about the same prices as the Perrysburg prices, and the township is settling fast ; within the past year 20 families have moved in to take up their abode amongst us.

There is considerable done in the lumber business. Lumber sells readily at the mills from \$7 to \$12 per 1,000 feet, and one of our saw-mills, for durability and expedition in sawing, is not surpassed by any other mill in the county.

The foregoing report is not as full as I would like to have it, but not being appointed a committee man to gather statistics, I make this report by the request of

the president of the society ; and the shortness of time that I had to act, and the pressure of business on hands, I have made the foregoing report, and believe it is as correct as it goes ; all of which is respectfully submitted.

SAMUEL H. BELL.

WASHINGTON TOWNSHIP,

October 15, 1851.

To the Directors of the Wood County Agricultural Society :

The local committee of Washington township, respectfully report as follows :

1st. The different farm crops.

WHEAT.—Whole amount, 5,000 bushels ; yield per acre, 18 bushels ; average price 75 cents. Corn, 3,000 bushels ; yield, 20 bushels per acre ; price, 38 cents. Oats, 2,000 bushels, aggregate amount ; yield per acre, 25 bushels ; price 25 cents. Hay, 500 tons ; yield per acre 1½ tons ; average price \$4 00. Buckwheat, 800 bushels ; average yield, 10 bushels per acre ; price 31 cents. Potatoes, 200 bushels ; yield 25 bushels per acre ; price 38 cents.

2d. Other products :

Wool, 600 pounds ; price per pound, 35 cents. Pork, 25,000 pounds ; average per pound, 3½ cents. Beef, 8,000 ; average price 3 cents per pound. Butter, 6,000 pounds ; price 12 cents. Principal articles of export, wheat, value \$3,700 ; sold in Perrysburg, Gilead, and Maumee. Kind and amount of live stock sold, horses 12, value \$600 ; cattle, amount sold, 50 head, price \$600 ; hogs, 50 head, value \$100.

3d. Fruit.

Apples, pears, and cherries, 400 bushels ; \$1 50 in value—quality pretty good.

4th. The number of mills, 5. Number of mechanical trades, 10. Number of school houses, 4. What variety of wheat preferred, Soule and China ; most exempt from injury, China and Black-chaff. Variety of corn preferred, Gourdseed and Dubbs. Potatoes preferred, Niggeroe and Peach-blow. Soil, a composition of black sand, loam, and clay. Amount under improvement, 2,000 acres.

WATER POWER.—The natural water power of Washington township is not excelled by any town in north-western Ohio ; and perhaps inferior to but few in the State. Bordering for several miles upon the Maumee, (Lake Erie's best tributary,) including Bear and Wolf Rapids, with a sufficient fall of water, and offering almost every facility for manufacturing purposes.

Kettle, Sugar and Tontogony creeks pass through and empty their waters into the Maumee, within our borders, each affording a large surplus of water. With such extensive water power and a rich and productive soil, a heavy and valuable growth of timber, with a sufficient quantity of lime and sand stone for all necessary purposes—there is presented great inducements to the farmer, manufacturer and emigrant.

In concluding our report, gentlemen, your committee beg leave to submit some suggestions.

In consideration of the facts that from the productions of the soil all are fed, and one great object is to benefit all by increasing its productions, your committee, being deeply impressed with the firm belief that the annual aggregate amount of crops may be, by thorough drainage, skillful and scientific cultivation, increased at least three fold, would respectfully submit the following :

1st. That the society offer as large premiums as possible, for the largest production of each of the field crops.

2d. That premiums be offered for the best ditching machine.

3d. That premiums also be offered for the best threshing machine. The above machines to be tested by actual experiment at the annual fair. The above we consider of great importance, and would prove highly interesting as a part of the exhibition. And we would further suggest that the above premiums be confined to members resident within the county.

All of which is respectfully submitted.

MARTIN WARNER,
JOHN BAMBER,
G. L. WARNER.

At a meeting of the members of the Wood County Agricultural Society, held in the Methodist Church, at Bowling Green, Oct. 16th, the following officers were elected for the coming year :

ELIJAH ELLIOT, President.
W. R. PECK, Vice President.
GEO. POWERS, Recording Sec'y.
HENRY HOOD, Corresponding Sec'y.
JOHN BATES, Treasurer.

S. H. BELL,
COLLISTER HASKINS,
DAVID WHITNEY,
JAMES DONALDSON,
MICHAEL HAYES. } Managers.

REPORT OF THE COMMITTEE ON GRAIN—OHIO.*

Best samples of Wheat, not less than 1 barrel—premium, \$5 00.

Entry No. 77—1 bbl. wheat, Thos. Hurt, near Cleveland, best sample bbl., Beaver Dam wheat, premium \$5. Apply to F. R. Elliott, Cleveland, for particulars.

No. 92. 1 bbl. White Blue Stem wheat, fine specimen, from W. Bonar, Mt. Vernon.

1 bbl. Austrilla wheat, very large berry.

One bundle unthreshed Austrilla wheat, very fine specimen, from Blydenburgh & Co., wholesale grocers, N. Y. Also, one jar of same variety, containing the following description: "This wheat has never been known to rust, since its introduction into this country. It has six rows to the head. The berry is large and white. It will not fall down when sown in the strongest soil. Price \$4 00 per bushel. Grown on farm of S. L. Thompson, Setanket, Long Island. Yield, 55 bushels per acre."

The grains of the above described wheat are white, and of extraordinary size.

COMMITTEE.

Best sample of Oats, one barrel, premium \$5.

Entry No. 27.—1 bbl., good specimen.

No. 41.—1 bbl. oats, very heavy. Premium \$5.

Best sample of Barley, one barrel, premium \$5.

Entry No. 45.—Sample of barley; quantity superior. Premium \$5.

Best sample Osage Orange seed, premium not stated on book.

Entry No. 97.—1½ bushels Osage Orange seed, from Jas. Sumpter, Union Co., Indiana. Should be entitled to a premium.

Best sample Indian Corn, two bushels of ears, premium \$5.

Entry No. 8.—Two bushels ears corn, from G. S. Innis, Montgomery tp., Franklin county. Premium \$5.

The committee are pleased to notice numerous specimen samples of various sorts of very superior wheat, and other seeds, imported by M. B. Bateham.

*This report should have gone in with the other reports of committees, on page volume, but was mislaid.

DISCRETIONARY.

Entry No. 30.— 1 bundle oats and straw; very fine specimen. Premium \$1.

No. 75.— One sample corn for bottom land, from Robert Leach, Madison Co.; good specimen. Premium \$1.

No. 96.— 10 ears of yellow corn, from George Bell, Madison county; best specimen. Premium \$1.

Best sample Flax Seed, one bushel, premium \$3.

Entry No. 44.— Sample Flax Seed; superior quality — quantity small. Premium \$3.

Best sample Hops, ten pounds, premium \$5.

One lot only exhibited — marked in error.

Class I. No. 71, entry No. 180, should be entered in class G. Entered by John Conoway, Ripley county, Ia. A very fine specimen, deserving a premium.

MUMMY CORN.

The committee noticed an ear, or rather head, of Egyptian corn, the seed of which is said to have been found in the hand of a mummy, in one of the catacombs of Egypt. The head contains a large quantity of grains. This was raised from seed received of Mrs. Hannah Gilmer, of New York, who received a head of the corn from a gentleman who took it from the hand of a mummy in Egypt. The head exhibited, was raised from seed mentioned above, and grown in Brooklyn, Conn., by Wm. Tyler, and brought to Ohio by W. W. Mather.

Best sample Timothy Seed, one bushel, premium \$3.

Entry No. 28.— 2 bushels timothy seed, very good; not quite pure.

No. 43.— Sample timothy seed, superior quality. Premium \$3.

Best variety of seed Corn, for bottom land, one bushel, premium \$3.

Entry No. 48.— 1 bushel bottom land seed corn, from Jacob Slygh, Franklin county.

Ohio Tobacco, quantity and premium not mentioned on book.

Entry No. 2.— Specimens of tobacco very good; worthy of discretionary premium diploma.

Best variety seed corn for bottom land, one bushel, premium \$3.

Entry No. 48.— 1 bushel corn for bottom. Premium \$3.

H. N. GILLETT,
Chairman of Committee on Grain.

VIII.

AN ESSAY, ON THE CHARACTER, COMPOSITION, AND IMPROVEMENT OF THE SOILS OF OHIO.*

BY CHAS. WHITTLESEY, ESQ.

The climate and the soil of Ohio, are so happily constituted, that neither could be materially changed, without placing those who are engaged in cultivation, in a worse position than they now occupy. There is here a pleasant medium of temperature, under which the animal frame acquires its best development, and the earth produces its greatest variety of useful vegetation. In warmer, especially in tropical climates, where man may be comfortable without much clothing, where, on account of spontaneous fruits and self-sustaining animals, he procures his food without systematical labor, indolence, improvidence and the most debasing ignorance prevail.

The soil of Ohio, in its *native state*, is rich enough for all good purposes, and those who hold it, will have performed their duty, if they maintain it in that condition.

The soil, is the real capital of the State; other interests are artificial or secondary, proceeding from this. They occupy, it is true, more of the attention of government, but this does not change the fact that the products of the soil are the basis of all the other interests. The National Congress has protected, and will continue to protect commerce, and at times it has favored manufactures, but the business of agriculture has been, and probably will be, left principally to itself. The farmer cannot too soon conclude that he must take care of himself, or no one will.

The most effectual mode of doing this, is by preserving his soil, this great gift of nature, at, or near its original strength. There is nothing more important to his pecuniary success, or to his comfort, than the adoption of this rule. Its consequence must be firmly impressed upon his mind, in a practical operative sense. He must *realize*, that his soil will no more retain ~~its~~ strength without food, than his horse or his cattle.

The reason why all farmers do not feel that such is the fact, is because the process of debility in one case is slow — in the other more rapid, but not less certain.

*A premium of \$50 was awarded to C. Whittlesey, the author of this Essay.

How many farms are there in Ohio, that have been worked 30 years, without feeding; or while one generation of its occupants has run its course? Their owners find no difficulty in realizing, that day by day, and hour by hour, they are certainly approaching the tomb, but forget that a good soil declines towards sterility, under constant use, faster than human life verges to its close.

As a question of political economy, what can be more prominent than the proposition to raise the greatest amount of produce, with the least cost?

The true value of each acre, is based upon the difference of these items in the shape of *profits*; and, if of *one* acre, so of all the territory within the State. Every crop removed, takes away something, and consequently, in a few years the *yield is less*. The taxes, seed, labor of cultivation, and cost of purchase, remain *fixed*, but the return diminishes year by year.

If there was at first a fair profit, the whole difference comes out of it, and soon a most fatal point is reached, where the cost and expenses of production are just *equal* to the yield. Of what *value* is a farm that merely pays in harvest, what it has cost during the year?

The farmer has no book of account with his premises, as the merchant has with his merchandize, and does not always discover the dangerous condition of his affairs. He works as hard as ever, plows and sows as much ground, his family are economical and industrious, but instead of laying up money, he is often troubled for the want of it. He attributes his troubles to a poor market, the fly, the drouth, or anything *but* bad farming. But his capital is gone. He is broke, but does not know it. His farm really produces him nothing. He dies; his administrators undertake for him, a settlement with himself. His exhausted lands are sold; perhaps his creditors get their just dues; and his heirs are surprised to find themselves without an inheritance or a home.

Instead of *one*, suppose all the farmers of the State manage in such a manner, how long would the country be inhabited? Look at "old Virginia,"—her sons abandoning her soil, because their fathers did not realize the necessity of sustaining it. Who are stepping in to supply their places? A people from the hard frozen north, whose ancestors, with a more meagre soil, left their children a better patrimony; because they sedulously restored, and knew how to restore economically, the exhausting of annual crops.

There are means within the reach of every farmer, of supplying these exhaustions. It is the proper sentiment, or *feeling* of its *practical necessity*, that is wanting. There is a choice of means, a better and best and cheapest method of manuring lands; but any mode, even the worst, is immeasurably better than none at all. Those who have the *will*, will find *ways* enough to improve their soil. There is room for argument about the *manner* of doing it; but none as between the doing and the omission.

That speaker or writer, who shall succeed in vividly impressing the public mind with the overshadowing consequence of maintaining the soil in its native vigor, will

have accomplished more in agriculture, than any author has done who has written upon the science of cultivation.

There must be in Ohio, near 1,500,000 acres of land in wheat, which produces, taking the average of years, about 16 bushels to the acre. In England, on a thinner soil, the average is fixed at 24 bushels per acre, showing that our present yield of that grain, might be increased one-half, and no more land be brought into cultivation.

IMPROVEMENT OF SOILS.

The "improvement of the soils of Ohio," must be effected principally, by the application of some kind of *manure*, which may be a substance of an animal, vegetable, or mineral nature; or a mixture or compound of them all. It may be a mere stimulant, calling into action, powers of vegetation that are dormant; or it may be vegetable nutriment itself, which is the best form. Applications may be made, that have no chemical effect, but merely mechanical, by which a compact and forbidding soil, is made lighter, more porous, and a better absorbent of water. Pure sand operates thus on stiff clay soil. The theory of the *manner* in which various chemical substances promote the growth of plants, is interesting and instructive, but the *determination* to apply such substances, is of far more importance than a knowledge of the theory. The best field of discussion, is upon the comparative *economy* of different manures. In the neighborhood of cities and villages, the farmer may procure, at a reasonable rate, a supply of stable or yard manure. But for general use, it is apparent, that some other resort must be had, and the most feasible and sufficient one appears to be that of *green crops*, turned under. Next to this, the use of the rotten material of bogs, marshes, and old mill ponds, made into compost by a mixture of lime or other alkali. No one doubts the policy of returning to the land, all straw, hay, stalks and chaff it produces; but this is not always practicable, and if it was, there is still a loss in the grain and roots that go to market, which must be supplied. For different kinds of soil, and different crops, the material abstracted, will be different, and also its proportions. In Ohio, it seems to me that there may be a natural classification of the lands, into *five* agricultural provinces or districts, wherein there is a similarity of soil and productions, and to which a similar course of treatment may be applied.

GEOGRAPHICAL DIVISION OF THE SOIL OF OHIO.

The "character" of our soil, over tracts embracing several counties, as it is indicated by external signs, and by the timber, presents a certain *uniformity*, by which it may be arranged in districts. These varieties or classes of soil, owe their difference, to geological causes. Over that part of the State, northerly of a line through Hanover, in Columbiana county, New Philadelphia, Newark, Circleville, Lebanon and Hamilton, the "northern drift," sometimes called the *quaternary* "diluvial" or

"superficial" deposits, has exercised a direct influence on the composition of the soil. The forces which brought on this mass of "drift," covering the stratified rocks, in places, 100 and 150 feet in thickness, these forces becoming less powerful towards the south. The materials are *finer*, along the southern limit which I have marked out, than they are in the northern part of the State.

The drift is generally a "hard pan," of a blue or yellow color; the blue always the lowest, and the yellow uppermost, and is generally the surface deposit. Almost all deep wells, in the drift region, penetrate to the "blue." The hard pans, contain *lime*, especially the blue, and also rotten logs, leaves, sticks and decayed vegetable matter, and furnish a strong but not a very tractable soil.

In other parts of the State, below the drift and boulder line, the soil is affected by the varied composition of the underlying rocks. It should be remembered, also, that near the line of separation, where the northern drift is constantly becoming lighter and lighter, the superficial matter is of a mixed and modified character; a *combination* of the hard pan and the decayed, and disintegrated shells, sandstones and limestones on which it rests.

There are, also, two varieties of the drift portions, of the same geological formation, but which differ externally from the hard pans and drift clays, although they are of the same origin and age.

The highest drift summits are composed of *coarse materials*, such as gravel, sand, and water-worn stones of all kinds; and the lowest depressions, around and beneath lake Erie, and also, lakes Huron, Michigan, and Superior, are filled with *finer materials*, such as clay, fine sand, and marl. It should, moreover, be borne in mind, that the lines of division which I lay down between districts, are only general and approximate, it being impossible with such waving and irregular outlines, to define them perfectly.

The State may be divided, agriculturally as follows:

I. THE COAL REGION.

This embraces about one-third of the State, and is mainly included between the Pennsylvania and Ohio canal, the Ohio canal and the Ohio river. The surface is hilly, without being precipitous; the soil, where it is not affected by drift, is light, easily tilled, produces a good crop: and a good variety of crops. In the southern part of the Reserve counties, and the northern portions of Columbiana, Stark and Wayne, it is modified by the northern drift, and is somewhat variable, but well known for its excellent wheat. The sandstone, shale, iron and limestone strata of the coal region form, when disintegrated, a well tempered soil. The timber of this district is various, like its crops; Hickory, Oak, Beech, Sugar-tree, Ash, Locust, &c.

II. NORTH OF THE COAL REGION AND THE RESERVE LINE, AND EAST OF THE HURON RIVER.

Here the soil is less tractable, being more clayey, and more hard pan, but of good strength. Its tillage is more expensive than lands further south; its texture more compact, and it does not resist drouth. This region is favorable to grass, more than to annual crops; the people have, therefore, engaged in raising cattle and sheep in preference to grain. There are large parcels of "oak" land, others of "beech and maple," and others of a mixture of these three kinds of timber, all indicating a variety in the soil. On the sandstone ridges, and summits, and on gravel knolls there is Chestnut, and on mixed soils, Hickory and other trees.

From this general description there should be excepted a belt of low land, bordering the lake, of a few miles in width, beneath the general height of the upland, on which are seen the "lake ridges" or longitudinal banks of sand, and terraces, on which the early settlers laid out their roads.

It is alternately sandy and clayey; its lower stratum at Cleveland and other places being a fine blue marly sand, which is of agricultural value, and of which there is an analysis given below.

III. THE NORTH-WESTERN DISTRICT.

This lies northerly of the summit, or water shed, between the lake and the river, and westerly of the Huron river. Here is an immense tract of level and gently descending country, with a rich, argillaceous soil, as yet only partially occupied, but destined to rival any portion of Ohio of equal extent. With the exception of some wet savannas, covered with weeds and coarse grass, it is heavily timbered with ash, elm, oak, beech, and maple, such as flourish in wet and moist lands. In its wild state, and while the fallen timber, logs and brush obstruct the surface drainage of the water, it appears to be too flat and wet for cultivation; but when cleared of the standing timber, the sun let in, drains opened, and the surface stirred with the plow, it proves to be capable of both tillage and good grass. All of this district is covered with drift, resting on limestone.

IV. WATERS OF THE SCIOTO AND MIAMIES.

There should be excepted from this sub-division a long and narrow territory, bordering on the coal region on the west, and described below, as the fifth district.

Passing the height of land, or crest, where the waters flow southerly, it is not long before the traveller perceives that the soil is becoming more dry, light and loamy. A comprehensive description of the south-western portion of Ohio, and south-eastern part of Indiana, drained by the Miamies and the Scioto, might be given in half a line, "as high, rolling land of rich loam." Its rich soil is intended for *tillage* in Indian corn and other summer crops, and is at the same time capable of producing wheat and grass.

It is peculiarly the "*corn region*;" but we should also add the *alluvial valleys* of the Muskingum and the Hockhocking, where this product flourishes fully as well as on the loamy uplands of the south-west.

V. THE BLACK SLATE REGION.

From Ashland, Richland and Wayne counties southerly, through Knox, Licking, Fairfield, Pickaway, Ross, Pike, Scioto and Adams, there is an irregular belt of land where the rocks below the coal show themselves, the *conglomerate, waverly sandstone and black slate* of the geological reports. They give, in the hilly portions, a rougher aspect to the country than the coal rocks, presenting more cliffs and steeper valleys. The soil is also affected; and although it is generally loamy on the uplands, it varies from the light loam of the coal region on the east, and the limestone region on the west. Towards the mouth of the Scioto, where the hills become abrupt, in the west part of Pike and Scioto counties, and the eastern portion of Adams, the soil is poorer and thinner than any other part of Ohio. But, in general, this belt of country is rich in agricultural resources, the upper part for wheat and grass, where it is modified by drift, the lower for corn and its consumer, the hog. Over all the districts I have designated, cattle and sheep are raised with profit.

CHEMICAL "COMPOSITION" OF THE SOILS OF OHIO.

As yet there has been so few analyses made, of Ohio soils, that their chemical constitution cannot be fully discussed. But one thing is certain, they are so composed that manures will be of advantage to them all, when they begin to fail. The *valuable* mineral ingredients of a soil constitutes only a small proportion of its mass.

From 85 to 90 per cent. is sand or siliceous, the fragments of rocks, finely divided, which acts merely as a basis or foundation for the plant with its roots, and as a sponge to retain moisture. The remainder contains various ingredients, some of which are available and others not. There are iron, lime, potash, soda, magnesia, as minerals; among acids, there are carbonic, phosphoric, sulphuric and humic, and also humus, a vegetable compound formed by chemical action in the soil. These are dispelled by heat, or dissolved by chemical agents. In rich western soils there is from (5) five to (10) ten per cent. of vegetable matter, either in a separate state or in the form of acids, or in union with alkaline bases, such as lime, soda, &c. The analysis of a specimen from the Scioto valley, given below, shows:

- 2.10 per cent. of Sulphate of Lime;
- 0.90 per cent. of Phosphate of Lime;
- 2.80 per cent. of Carbonate of Lime.

The other useful ingredients are also very small in proportion to the whole, which explains why the application of very limited amounts of plaster, salt, or guano produce visible effects upon a crop.

So small, indeed, is the per centage of some of the soluble and necessary ingre-

dients, that the chemist is compelled to use the utmost care, and to operate on large specimens in order to discover them. It will be seen, in one case that I shall give, that the potash and soda together made only 0.145, or about *one-sixth* of one per cent. By the mysterious action of the roots of plants upon mineral and organic substances in the earth, a separation is effected, as close and subtle in its operation as any of the processes of the laboratory, and, like all of nature's works, by some fixed rule. The quantity of mineral matter, appropriated by vegetables, is so trifling that it was once thought to be a mere accident.

But research soon showed that these minute proportions were there as a necessary part of the vegetable, and according to an universal law. It was soon found that the plant required and took in, in a healthy state, a fixed quantity, and then ceased to imbibe its mineral ingredients, however abundant they might be; thus showing that a surplus of these substances is no better than a supply. But, on the other hand, a deficiency is fatal to the plant, forming, as it does, a part of its necessary food.

The "inorganic" or mineral constituents of vegetation are visible in the *ash* or ashes. This residue, after complete combustion, is evidently drawn from the soil, for it does not exist in the air. The average weight of the ash of the dried berry of six (6) of our most common grains is *one pound and $\frac{27}{100}$* in 100 pounds; of their dried straw, *four pounds $\frac{28}{100}$* , and of six (6) of our common trees 0.97. The weight of the ashes of *leaves* is much greater.

The ash, when subjected to analysis, presents many interesting and useful facts. The tree or stock has its proportion of mineral elements, and the berry, fruit, bulbs, straw, and all parts have different proportions. It is thus Agricultural Chemists discover how to remedy certain defects of soil, by replacing the mineral substances that are wanting.

These extremely small and imperceptible quantities, when considered in reference to an individual plant, become, when the product of an acre or a farm is collected, of considerable bulk and weight.

A ton of dry clover has a residue, after burning, of about (140) *one hundred and forty pounds*, so that, at *two tons* to the acre, there is 280 pounds carried away from the land at each mowing.

The ashes of wheat straw weigh 70 pounds to the ton, of which ($5\frac{1}{2}$) *five and one-half* pounds is lime. In this way it is easy to demonstrate the annual consumption of the mineral ingredients of land, and how different crops act differently upon the soil. It is not yet settled *how much per cent.* of "organic" matter of the soil is drawn away by a crop, because many of the same elements are taken from the atmosphere. Experiments upon the *relative proportions* obtained from these sources are still to be made, and is it not due to the cause of agriculture, and worthy of a grain growing State, that they should be made at the public expense?

"COMPOSITION" OF OHIO AND WESTERN SOILS.

We have at this time only a meagre knowledge of the chemical constitution of our soils. Only a few analyses have been made, and those not always carried out through all those nice and tedious processes, necessary to extract all the minute elements. In 1845, I examined several specimens from Hamilton county, and the Kentucky lands, opposite Cincinnati, the results of which are here given. There have been a few samples thoroughly analyzed by foreign and American chemists, which are also given ; but the mode of classifying the ingredients, and the terms used are so diverse that they cannot all be arranged in one table.

SOILS FROM HAMILTON COUNTY AND THE OHIO RIVER.

LOCATION — REMARKS.	Earthy resi- due insoluble in acids.	Vegetable matter, solu- ble and insolu- ble.	Carbonate of lime.	Oxides of iron.	Water not expelled at scorching heat.	Carbonate of Magnesia.
<i>Mt. Pleasant.</i> —Farm of Chas. Cheney, Esq.,—30 years culti- vation, without manure—timber, oak, sugar and beech— depth of tilth, six (6) inches. <i>Specific gravity, 2.29</i> -----	90.10	2.50	2.00	3.52	1.45	
<i>No. 2.</i> —Same farm—10 years in meadow, and 5 years in wheat and corn—depth of tilth, 7 inches.-----	91.15	4.20	1.51	0.43	1.62	
<i>Covington, Ky.</i> , 3 miles from Ohio River— <i>G. T. Williamson</i> — stiff soil, 20 years cultivated without manure—oak and beech. <i>Newport, Ky.</i> —River hills—Thos. J. Hooper, Esq.—wild land ; Beech, poplar, pawpaw -----	87.08	7.30	0.22	2.50	2.60	1.30
<i>No. 2.</i> —Same farm—ten years in cultivation ; twice dressed with good manure.-----	81.46	13.50	2.74	0.30	2.00	
<i>No. 3.</i> —Same farm—25 years cropping—no manure—twice in clover.-----	90.03	4.57	3.97	0.43	1.00	
<i>Bradensburg, Meade County, Ky.</i> —Barrens—produces excellent peaches -----	94.46	3.10	0.76	0.31	1.37	
<i>Subsoil</i> from Mr. Cheney's farm, Mt. Pleasant, Ohio—bright, yellow and loamy—specific gravity, 2.33 -----	86.60	3.53	3.10	4.21	2.13	
<i>Scioto Bottoms.</i> —Cultivated 14 years without manure.—Mass. Geological Reports -----	94.57	1.20	1.00	0.31		0.52
	83.00	11.20	2.80	phos. of lime 0.90	5.30	Sulp. of lime 2.10

Only a part of the soils examined by me were tested for soda, and phosphates, and those gave no appreciable quantities; because the specimens experimented on were not sufficiently large. Most of them contained *traces* of magnesia. No separation of the manganese from the iron was attempted. The column of "vegetable matter soluble and insoluble" in water, embraces the compound called humus, or geine, Humic, and other vegetable acids, and their salts. In the specimen of subsoil from *Mt. Pleasant*, the clay was 31.15 per cent. They are all upland soils, except the last, and from 100 to 400 feet above the Ohio.

Fertile Soil, and its Subsoil of the Ohio Bottoms—a close Analysis by Sprengel.

	Soil.	Subsoil.
Sand or Siliceous.....	87.143	94.261
Clay, or Alumina.....	5.666	1.376
Oxides of Iron.....	2.220	2.336
Magnesia.....	0.360	1.200
Lime (caustic).....	0.564	0.243
Potash, as Silicate.....	0.120	0.240
Soda, ".....	0.025	
Phosphoric acid, in combination.....	0.080	-----
Sulphuric, do do.....	0.027	0.034
Chlorine, do do.....	0.036	-----
Carbonic, do do.....	0.080	-----
Humic acid.....	1.304	-----
Humus (insoluble).....	1.072	-----
Organic substances.....	1.011	-----
	100.000	100.000

Analysis of *prairie soil*, from the farm of Dr. J. A. Kennicott, Grove, Illinois,—black, loose friable loam—summit of a "prairie roll"—By Prof. Blaney, of Chicago.

Silica (insoluble).....	77.286
" (combined).....	0.328
Clay, (alumina).....	2.880
Oxide of iron.....	3.458
Carbonate of lime.....	1.094
Magnesia and other alkalies not separated.....	2.369
Organic matter, soluble and insoluble, in water.....	9.166
Water.....	3.500
	100.081

A couple of specimens of the lower or "Blue Marly" stratum, at Cleveland, were coarsely analyzed by me in 1840, one taken from the foot of Antonia street,

and the other from the gulley at the brick yard 2 miles from the Lake, near where Judge Whittlesey then resided. The average was as follows :

Silica	77.50
Carbonate of lime	6.40
" of magnesia	9.25
Iron, (oxides, sulphates, &c.)	3.20
Vegetable matter, water and acids	3.65
	<hr/>
	100.000

This is an excellent fertilizer for grass, on light sandy soils.

As I have already remarked, the yellow and blue "hard pans" contain lime, and most of them enough to effervesce smartly with nitric, or even acetic acid, as it exists in strong vinegar. I have tested some of the "blue clays," as they are called, that contain 21 per cent. of lime. Their marly character may be seen around wells, where they crumble down on exposure, forming a rich soil that sustains a vigorous vegetation. There are also beds of shell marl, of which I have heard in the counties of Medina, Erie and Licking, whose value could be determined by analysis.

Such, so far as I am informed, was the state of agricultural analysis in Ohio, until the present year, when the State Board made it one of the duties of its Secretary, Professor Mather, to receive and analyze soils for the counties, at the mere cost of the process. The results not having been published, I can comment only upon the facts before us.

Before a thorough discussion can be gone into, there should be at least 30 analyses, in each of the five grand agricultural divisions I have indicated, the specimens selected in each district with great care, by the same person, and so selected as to represent the average of the district. Such a proceeding, carried out with sufficient means, by all the lights of modern science, to the ultimate elements of all parts of the soil, and of such of the products of the soil as have not already been well analysed, would form throughout all time the basis of theoretical agriculture in Ohio.

Even the imperfect and incomplete analytical facts before us, show by chemical methods, the depreciating effect of cultivation, where the soil is neglected.

Mr. Hooper's wild, rich, uncultivated land, gave in

Vegetable compounds	13.50
The same with 10 years' cultivation	4.57
" " 25 " " 	3.10

The tract from whence the last named specimen was taken, had reached the non-remunerating point.

Mr. Cheney's land, which had been 10 years in meadow and 5 in wheat and corn,

Gave	4.29
The same, 30 years "under the harrow,"	2.50

The depreciation of *available* nutriment is, however, *greater* than these figures express. This compound of humus (or *geine*) humic, phosphoric, and other acids, necessary to the plant, is partly *insoluble* and not in a proper state to be carried into vegetation. The loss, therefore, falls upon the available part, while the unavailable portion remains nearly constant.

I commend these facts to those who treat their lands as though they were not subject to a daily and hourly loss of vitality, but were capable of renewing themselves without assistance from art. It is not necessary that all the valuable ingredients should be exhausted, or even *one* of them, in order to produce comparative sterility. When the relative *proportions* are reduced, the crop languishes. If the lime or other alkali is in the native state of the soil, but little more than the crop consumes in a season, and the other compounds are sufficient for 25 years cropping, the land will fail the second year, almost as much as it would if the *alkaline and vegetable* matter were both deficient. Their *mutual relations* are destroyed.

Another important conclusion may be drawn from the above tables, in regard to deep plowing. In the two cases of analysis of "sub-soils," it will be seen, that the lime in one instance is 0.243, and other alkalies 0.240; in the other (Mr. Cheney's,) the carbonate of lime is 1.000. This was taken from below all plowings, where the earth had never been disturbed. It is perfectly certain that either of these sub-soils, turned up and supplied with manure, or vegetable matter, would sustain a crop, and if mixed with the incumbent soil, would add to its fertility.

GREEN CROPS AS MANURE.

I now recur to the subject of manures, and to the plan of *green crops* and compost, as the cheapest and best mode of restoring soils, for the country at large. Those who are fortunately situated near large towns or villages, may do better with stable manure, city offal, ashes, or other refuse material of a town.

I do not affirm, that the turning in of green crops, whether grass, clover, buckwheat, rye, oats, or any other growth of this country, will alone sustain a soil through all time. It must be evident to all, that a growing crop turned in, only returns to the earth the *same mineral* ingredients it extorted from it. The land is, in that respect, neither richer nor poorer than it was before. But the benefit arises principally in giving to the soil organic substances, in the state of carbon, nitrogen, or vegetable acids, which were drawn not from the land, but from the atmosphere. Now, if in the period of cropping, some of the product is carried off, or if part of the green crop to be turned in is removed, as in the case of hay, or pasture on sward ground, there *must be a loss* of mineral matter; so that in process of time, very slowly to be sure, but still with certainty, the valuable mineral substances will disappear. Therefore, to keep a farm in a perfect state, there must be *with the green crop, some addition* of alkalies to the land, by the hand of man.

This is why good manure and composts, on the whole, exceed in value all other applications, when they can be had at a reasonable cost.

They contain *both the vegetable and the mineral* fertilizers. The urine of animals furnishes *salts*, such as phosphates, urates, sulphates, and muriates, that are of the highest use in the economy of vegetation.

There are many plants which draw much of their substance from the air, which being consigned, in its perfect state, to the earth, is a clear gain to the soil. They draw a part of the same ingredients from the vegetable compounds already in the soil; and as I have remarked, the exact proportion derived from both sources, is not ascertained, but an important part is supplied from the exhaustless magazine of the terrestrial atmosphere. Johnson says, p. 418:

“Growing plants bring up from beneath, as far as their roots extend, those substances which are useful to vegetation, and retain them in their leaves and stems. By plowing in the whole plant, we restore to the surface what had previously sunk to a greater depth, and thus make it more fertile than before the grain crop was sown. Manuring is performed with the *least loss*, by the use of vegetables in a green state. By allowing them to decay in the open air, there is a loss both of organic and inorganic matter. If they are converted into farm yard manure, there there is also a great loss, and the same is the case if they are employed in feeding stock, with a view to their conversion into manure. *In no other form can the same crop convey to the soil an equal amount of enriching matter, as in that of green leaves and stems.*”

The farmers of Ohio have long acted upon this plan, in the use of clover, but the practice has not been carried to the requisite number of acres of their land. In the wheat counties, they have done better than elsewhere, and there the effect is visible in the appearance of capacious granaries well filled, whose owners are able to keep their grain for years without sale, if the market is low. It may be said that clover is the best plant for this purpose, or that at all events it is good enough. Judging from the happy results on the gravelly wheat soils, if not good enough, it is certainly a very beneficial and profitable mode of culture.

The plant which, for this use, is the most valuable, is that one which will permit a part of its growth to be mown, or taken off, and be of some value, like hay, and leave in the *roots* a sufficient dressing for the land.

Perhaps, in this climate, red clover fulfills more of these conditions than any other vegetable. At the end of two years, it leaves in the ground a weight of *dried roots*, equal to one half of all the hay cut from the land in that time. If 4 tons of hay have been cut, there will be two of stubble and roots, which are worth *four times* as much by weight as yard manure. There are some grasses that yield a still greater proportion, and they are worthy of examination and trial.

According to a German experiment, made by Henbec, the ‘sheep’s fescue grass,’ yielded at the end of four years, 266 pounds of dry roots to 30 pounds of dry hay, and the ‘Perennial rye grass,’ 300 pounds to 17. There is a plant in that country

called 'Borage,' which draws of its organic matter, *ten* parts from the air, to *one* from the soil.

Now it must not be supposed that land can always be kept in good heart by an alternation of clover and wheat, for in practice, and by theory, the time will come when the clover will cease to thrive. In pursuing the system of green crops, there must be a change, for any crop, or any species of vegetation, eventually exhausts its favorite element, and sickens, if it does not die out. A change of the green crop will be necessary, as well as a rotation of the raised crop.

On our new land, the capacity to produce clover and grass has not as yet been perceptibly diminished; but another generation will no doubt discover it. So that our true policy is, to resort to a more extensive and unintermitted system of manuring the land: To do this, in general, by *green crops* laid under, as a principal mode, but to remember that all the yard manure that can be had, should be used, and all the compost manufactured, that we have the materials to furnish.

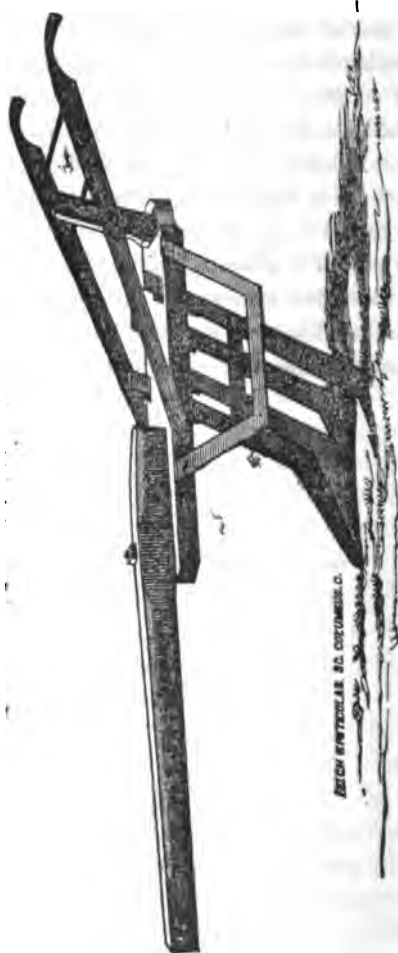
Construct barns, and stables, with close floors, so as to save the urine of all animals, either in the manure or by out side gutters, to collect it for separate use.

The leaves which collect in low grounds, and the stuff thrown out of muck ditches, may be profitably carted into heaps, in which there should be mixed either ashes or lime. Barn yards should be so constructed, that the trash will not leave the yard, but collect in some part of it where rubbish, muck, and ashes, such as every farmer has, will become his richest manure. A proportion of saw dust, placed in such a position, increases the effect, not only by adding more vegetable matter, but by absorbing, and thus saving ammonia and useful acids.

IX.

FARMING IMPLEMENTS, & C.

WM. C. PAGETT'S SUB-SOIL PLOW.



This Plow received the first premium as a sub-soil plow at the second Ohio State Fair, at Columbus, September, 1851, and it is highly spoken of by those that have used it.

THE MICHIGAN DOUBLE PLOW.



The first Premium was awarded, on the plowing match, to this plow, at the second Ohio State Fair.

" This plow consists of two plows, placed one before the other, on the same beam. The forward one takes a furrow from 3 to 6 inches deep, separating the roots of the grass or vegetable matter, and lays its slice surface down, in the bottom of the previous furrow, and the hind one follows from 4 to 6 inches deeper, and raises and deposits its slice on that of the forward one. In being raised and turned the subsoil is broken and mellowed, and spread loose and evenly over the sward, or, in the language of the State Agricultural Committee of New York, in their report says: It makes a seed bed almost as perfectly as a spade. The fermentation and decomposition of the under stratum of vegetable matter and manures commence just at the time the germination and growth of the grain plants commence, and afford to the latter the rich nourishment of their gases at the very time it is needed most. I have now manufactured and furnished the farmers with this plow for two years, and find myself enabled, from their experience and testimony, to present to the public the following facts:

" *The draft of the plow* is less than that of the common plow, taking the same depth of furrow; it does better plowing in hard ground and in stony ground, and ground not brought to smoothness by use, than is done with the common plow; a single plowing with it disposes of the vegetable matter and mellows the ground more effectually than is done in summer fallowing with the common plow, by plowing the ground twice—it, therefore, makes a saving of the use of the ground while fallowing, and of the expense of once plowing; it buries the vegetable matter at such depth as smothers it at once, and effectually kills the blue June and quack grasses, and other pestilent weeds so injurious to crops; it raises the ground into swells or ridges much easier than it is done with the common plow, and makes such depth of the loose earth that the water settles from the surface and relieves the crop from any injurious action—on the other hand, in a dry time, the water thus settling down, is brought again by the heat to the surface, so that in wet or drouth, the ground seems to derive from the use of this plow these beneficial effects; it causes the ground to continue more open and mellow during the growth of the crops, in consequence of which, and its freedom from weeds, it is much easier cultivated with the hoe; and it tends to enrich the ground and increase its productiveness—the yield of wheat, oats, corn, and potato crops of the same field being, in nearly every instance, from a quarter to a third heavier than where the common plow has

been used. This effect upon the soil seems to result more from three prominent causes: From the saving and better application which it makes of the nourishing properties of the vegetable matter and manures to the growing plants; from the more open state of the soil which admits, more fully, the warmth, moisture and gases of the atmosphere to the roots of the plants; and from the freedom of the ground from weeds, which leaves all its nourishment to the crop.

"It will enable you to plow your ground deeper; it will save you nearly one-half the expense of putting in and cultivating your crops; it will deepen and enrich your soil with diminished expense in manuring, and it will increase the yields of your crops from one-fourth to one-third."

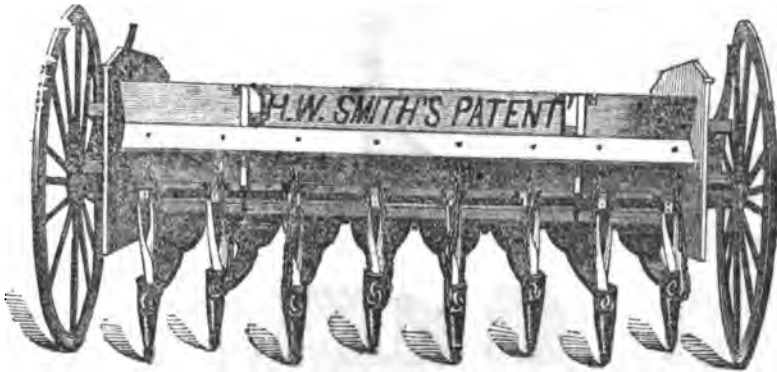
AARON SMITH, *Patentes.*

NEWELL FRENCH, *Proprietor.*

Certificates and recommendations of the great superiority of the above plow are in our possession, but it is deemed unnecessary to insert them here.

HENRY W. SMITH'S IMPROVED PATENT DRILL.

Manufactured by E. THRESHER & Co., Dayton.



The advantages claimed for this drill are as follows :

1st. The draft upon the horses, or team, is much lighter than that of many, if not all others.

2d. It can be regulated with the most exact accuracy, to any given quantity, in a few minutes, and without the least difficulty.

3d. The teeth being staggered, or set back and forth, enables the machine, where there is stubble, weeds, manure, clods, stone, &c., to perform much better than where the teeth are set in a line.

4th. The axle being in two pieces, and each wheel geared exactly alike, is an improvement of vast importance, as the machine works fair on the team, and turns right or left, with the same ease.

5th. The grain being exposed to view, as planted, in connection with the separate regulator for each planter, is an arrangement truly valuable, for should one planter vary in quantity from the rest, it is at once discovered, and by the separate regulator, can as soon be remedied.

6th. Strength, durability and simplicity, (there not being a cog wheel about the entire machine,) are matters of much importance to the farmer, who wants a machine that almost any one can work.

7th. The teeth can be raised from 12 to 16 inches, and thus can be got over any reasonable obstruction, without having to drive round, and leave a large portion in many fields not planted.

8th. The seeding cylinders are permanent, always in their exact position, and being full of cups, their connection with the regulator must throw a regular stream, which increases or diminishes in exact proportion as the team travels, be it fast or slow. Price \$70.

COOK'S REAPING MACHINE.

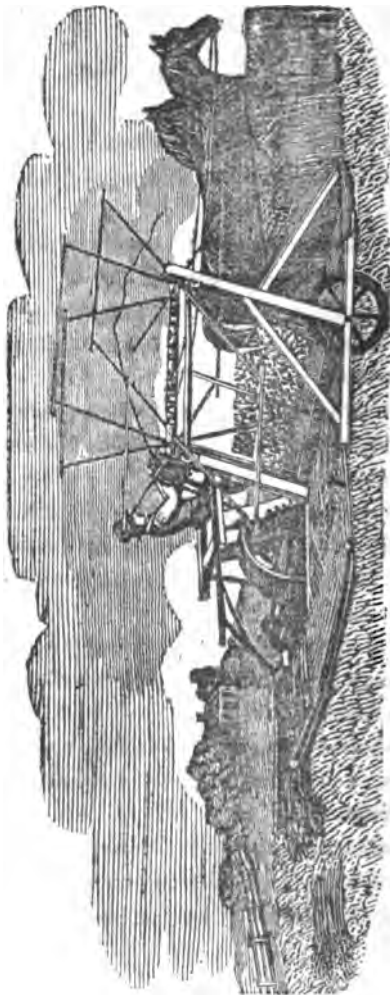


Figure 1.

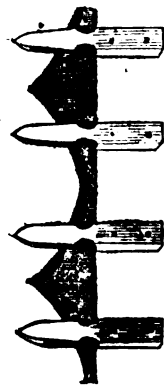


Figure 2.

Figure 2, represents an improved form of Sickle and Guard, which is new and original.

Neither this machine, nor any other reaping or mowing machine, received any award at the Second State Fair, a trial in the field being necessary to decide the relative advantages of the machines. The above cut, and subjoined statement, having been received for insertion in the Agricultural Report, they are here inserted. A trial of the various reaping machines and mowing machines, will be made both in Ohio and New York, the coming harvest; and the awards at those trials to be made by committees appointed by the Ohio State Board of Agriculture and the New York State Agricultural Society, will be deemed important decisions by our farmers. The relative advantages and disadvantages of each, under varied circumstances, will be made known.

STATEMENT BY A. J. COOK,

Of Egan, Clark County, O., in regard to his Machine.

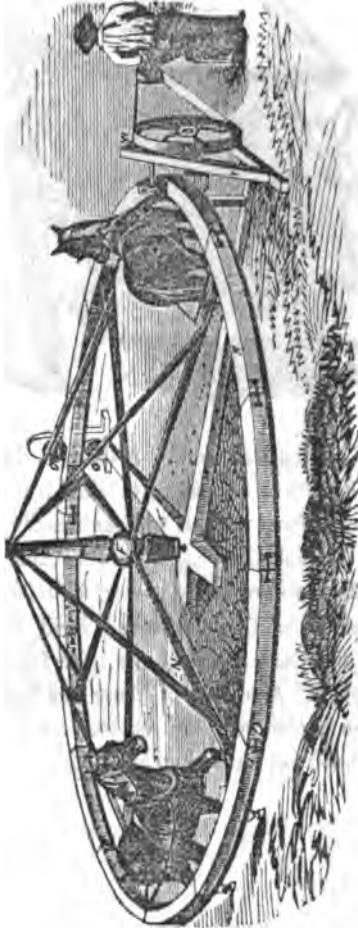
Various attempts have been made to make a self-raker, but all previous ones have failed to accomplish the grand object, which is, to make the separation between the falling grain and sheaf to be thrown off the platform. All former inventors have attempted to rake the grain off at the side from which it is constantly falling on the platform; in raking the grain off at the side from where it is constantly falling, the butt of the sheaf, as it lays on the platform, is against the butt of the grain cutting, consequently, as the sheaf is moved off at the side, it moves the butt of the cut grain, before the top has fallen, and pitches the top of the falling grain across the platform cornerways, as it is thrown off, the sheaf and falling grain hanging together, it is left in great disorder, partially scattering from bunch to bunch. That difficulty is obviated, in this machine, by a revolving rake, working in connection with the reel, which strikes in at the butt of the sheaf as it lays on the platform, and moves it smoothly back on to a revolving canvas, making the separation complete between the falling grain and the sheaf, so as it moves off to the side on the canvass, and there is nothing to interfere with it; it is rolled into a box, then is shoved back on the stubble by the operation of the machine, without scattering between the bundles. The subscriber experimented, some years ago, on a plan to throw the grain off at the side from where it is constantly falling; finding it impossible to make its separation perfect, so as to leave the grain in a respectable condition for binding, it was therefore abandoned. Scores of others have tried similar plans, and all have failed to give satisfaction, from the same cause. From several years' experimenting, and improving every season, I feel prepared to offer an article to the public, that has not been excelled in the neatness of its work,

neither can it be in cutting or raking. They are warranted to cut all kinds of grain, either wet, dry or green, and grass, without the least liability to clogging. It has several important advantages over others now in use, besides the raking.

- 1st. It is stronger and more durable.
- 2d. It cuts all kinds of small grain or grass, whether wet or green, without clogging the sickle; which is owing to an improved form of the sickle and sickle-guard.
- 3d. It is arranged to cut the grain at any required distance from the ground, from five to twelve or even sixteen inches.
- 4th. The principal weight of the machine is balanced upon the ground-wheel, thereby overcoming, in a great measure, the side pressure, which is very objectionable to both McCormick's and Hussey's. The wheels being larger, and the side pressure obviated, the draft of it is much lighter than that of other machines.
- 5th. It cuts wider than other machines, and does the raking much better than it can be done from any machine by hand.
- 6th. The reel is larger, and revolves much slower, than with other machines, consequently does not shell out the grain in its operation.
- 7th. The gearing is snugly boxed, which secures it from dust and dirt; and being kept clean, runs much easier and wears longer.

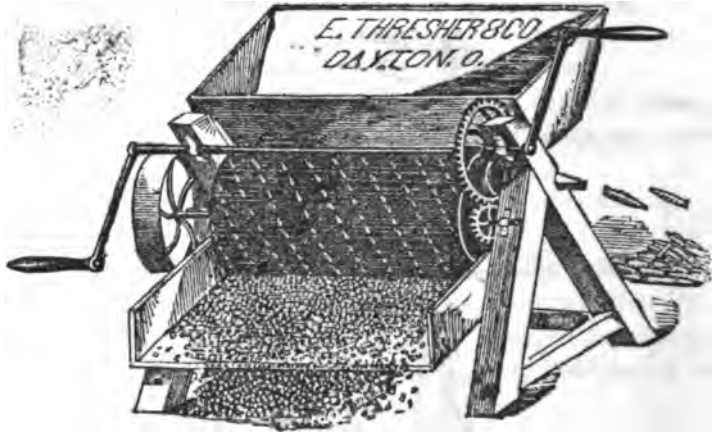
TAPLIN'S PATENT PORTABLE HORSE POWER.

Manufactured by E. THRESHER, & Co. Dayton, Ohio.



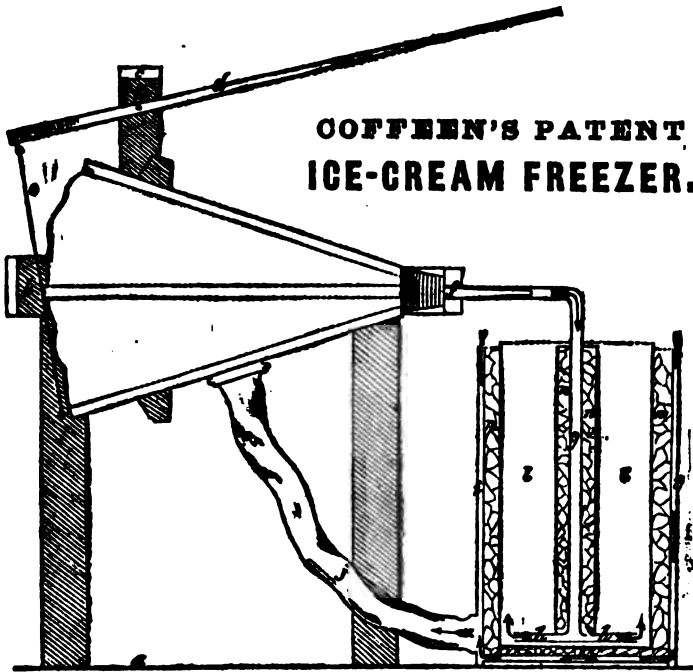
“Has received the first premium at the New York, Pennsylvania and Ohio State Fairs, and at the American Institute. This power is adapted to driving threshing machines, cotton gins, corn shellers, portable grist and saw mills, and every description of machinery that can be propelled by horse power. Two horses will do as much work with this power as three can with any other, and with much more ease to the horse. Indeed, it is admitted to be the best machine now in use. It is durable and portable. It can be put up, or taken down in twenty minutes by two men, and transported in a common wagon, as it weighs but 800 lbs. It is simple in its construction; in case of accident, can be repaired by any mechanic. It can be operated with equal ease by 1, 2, 3, 4, 5, or 6 horses, according to the power required. With one of Eddy & Taplin's patent cast-iron threshing machines, also manufactured by E. Thresher & Co., and three horses, it will thresh 400 bushels of wheat in a day. With one horse, and their corn sheller, it will thresh 500 bushels of corn per day. Price \$90 00.

THE CORN SHELLER



"Manufactured by E. THRESHER & Co. is simple and durable, occupies little space—may be worked by one or two men, to shell a bushel of corn in a minute. With one or two horses and three men, it will shell easily 500 bushels per day. It separates the corn from the cob, leaving both unbroken and in the best possible order. Price, complete for hand or horse power, \$30 00."

Cuts and descriptions of Smith's Improved Drill, Cook's Reaping Machine, Portable Horse Power, and Corn Sheller have been furnished for this report, and they are inserted by request. One only of these has had an award at the State Fair. Cuts of few of the implements that received awards have been received for publication, else these would not have been inserted.



Invented by Goldsmith Coffeen, Jr., of Warren County, Ohio. Patented the 13th of November, 1849.

[This machine received the award of a diploma at the second State Fair of Ohio.]

The nature of my invention consists in causing a blast of chilled air to permeate, be diffused through, and disturb the liquids and materials of which *Ice Cream* is made.

I chill the blast by drawing it from a receptacle, which is made to surround the sides and bottom of the vessel containing the ice or refrigerating mass. Within this vessel containing the liquids or materials of which the ice cream is to be formed, is placed, and the interval between the two packed with ice or the freezing compound. The air may be drawn off at a central opening, in the bottom of the air chamber. A section of elastic hose is fastened in any usual way to the opening, and similarly attached at its other end to an ordinary double bellows, mounted on a suitable frame.

An air-pump, bellows, or any other contrivance adapted to the purpose of forcing the chilled blast through the liquids and materials of which ice cream is formed, may be used. In the drawing, I have mounted a double-acting bellows upon a frame, and appended a lever for operating the same from a gallows constructed for that purpose.

The lever is attached in the ordinary way to the lower division of the bellows. To the nozzle of this bellows, I append a tube, which passes down through the middle of the ice cream tub, and separates into four or more horizontal branches, open at their ends, at the bottom of the same. Around the upright portion of this tube, and of a height equal to that of the ice cream tub, there is a cylindrical vessel constructed, of which the upright tube thus becomes a part, and around which the bottom thereof is soldered just above the branches of the tube. This vessel is also well packed with ice, or the refrigerating compound used. And thus the blast of air, as it passes down the tube, is a second time brought into contact with the chilled surface. It will also be readily perceived that the ice, or refrigerating compound, is also acting during the entire operation, by being brought into full contact with the sides of the space holding the liquids and materials of which the ice cream is to be made, both at the centre and the periphery of the said space. The chilled air blast being forced through the horizontal branch tubes, bubbles up through the whole body of the liquids and materials intended for the ice cream, and besides abstracting caloric from them by its own immensely extended contact therewith, it thoroughly disturbs them, and brings every portion of the same into continually repeated contact with the refrigerating surfaces, due to ice or freezing compound, packed in the vessel therefor, as described above.

(a) is the floor—(b) is the frame supporting the bellows—(c) is the gallows supporting the lever—(d) that operates the bellows by means of a link—(f) is the nozzle of the bellows—(g) is the air tube—(h) are the branches of the same—(i) is the space between the two vessels for the introduction of air to the elastic hose—(j) from which it is drawn by the bellows—(l) is the vessel holding the liquids and materials of which ice cream is to be made—(m) is the mass of ice or other refrigerating materials surrounding the same—(n) is the vessel surrounding the air tube (g) and filled with ice.

Having thus fully described the nature, construction and operation of my invention, what I claim therein and desire to secure by letters patent, is the freezing cream or other liquids by forcing through them currents of air chilled by passing them through chambers artificially cooled, substantially as set forth.

G. COFFEEN, JR.

THOS. G. CLINTON,
H. CLAY FREEMAN.

LIST OF LETTERS sent to the presidents of County Agricultural Societies, containing their certificates to draw funds from the County Treasury, under section three of the act for the encouragement of Agriculture, for the year 1851-2.

COUNTIES.	PRESIDENTS.	P. O. ADDRESSES.
Ashland	James Workman.....	Hayesville.
Athens	S. S. Rice.....	Amesville.
Belmont	C. Hoover, pr. J. McG. Kerr	St. Clairsville.
Brown	H. Penn.....	Georgetown.
Butler	F. Anderson.....	Hamilton.
Carroll	Charles Fawcett.....	Carrollton.
Champaign	Wm. Vance.....	Urbana.
Clark and Madison	Alexander Waddle.....	S. Charleston.
Clermont	Samuel R. S. West.....	Olive Branch.
Columbiana	John Farrell.....	New Lisbon.
Clinton	Isaac Haslet.....	Wilmington.
Crawford	R. W. Musgrave.....	Sulphur Spring.
Cuyahoga	Buckley Steadman.....	Cleveland.
Coshocton.....	C. F. Sangsten.....	E. Plainfield.
Fayette	Daniel McLean.....	Washington.
Franklin	S. Medary.....	Columbus.
Gallia	Jehu McDaniel.....	Gallipolis.
Geauga	Lester Taylor.....	Chardon.
Greene	Walter Parry.....	Xenia.
Hardin	John Hinkle.....	Roundhead.
Harrison	John Haverfield.....	Cadiz.
Highland	W. H. Trimble.....	Hillsborough.
Holmes	J. R. Buckminster.....	Millersburg.
Huron and Erie.....	Philo Adams.....	Huron.
Jefferson	George McCulloch.....	Wintersville.
Knox	William Bevans.....	Mt. Vernon.
Lake	C. B. Smith.....	Painesville.
Licking	P. N. O'Bannon.....	Utica P. O.
Logan	Luther Smith.....	West Liberty.
Lorain	B. C. Perkins.....	Rochester Depot.
Mahoning	A. Baldwin.....	Boardman.
Marion	J. S. Copeland.....	Marion.
Medina	J. S. Pritchard.....	Brunswick.
Meigs	Stephen Titus.....	Pomeroy.
Miami	Asa Coleman.....	Troy.
Monroe	Joseph Morris.....	Woodsfield.
Muskingum	Rev. C. Springer.....	Meadow Farm.
Perry	Aaron Johnson.....	Somerset.
Pickaway	Thomas Huston.....	Circleville.
Pike	John I. Vanmetre.....	Piketon.
Portage	David McIntosh.....	Shalersville.
Preble	Enoch Taylor.....	Eaton.
Richland	Mordecai Bartley.....	Mansfield.
Ross	James Vause.....	Chillicothe.
Scioto	Lemuel Moss.....	Portsmouth.

LIST OF LETTERS—*Continued.*

COUNTIES.	PRESIDENTS.	P. O. ADDRESS.
Seneca.....	Lewis Baltzell.....	Tiffin.
Shelby.....	Irwin Nutt.....	Sidney.
Stark.....	James S. Kelley.....	Massillon.
Summit.....	Amos Spicer.....	Akron.
Trumbull.....	Harmon Austin.....	Warren.
Tuscarawas.....	Elisha James.....	New Philadelphia.
Union.....	Joshua Judy.....	Marysville.
Vinton.....	Joseph Kaler.....	McArthur.
Warren.....	Ezra Carpenter.....	Clarksville.
Washington.....	D. Woodford.....	Watertown.
Wayne.....	Thomas Reed.....	Dalton.
Wood.....	Elijah Elliott.....	Perrysburg.

X.

PREMIUMS AND REGULATIONS,

WITH THE NAMES OF THE

AWARDING COMMITTEES,

FOR THE

THIRD ANNUAL FAIR

OF THE

OHIO STATE BOARD OF AGRICULTURE,

TO BE HELD

AT THE CITY OF CLEVELAND,

On the Fifteenth, Sixteenth and Seventeenth days of September, 1882.

MEMBERS OF THE BOARD.

ARTHUR WATTS, <i>President</i>	CHILLICOTHE, Ross County.
J. G. GEST, <i>Recording Secretary</i>	XENIA, Greene County.
C. SPRINGER,	MEADOW FARM, Muskingum County.
A. TRIMBLE.....	HILLSBORO, Highland County.
J. M. EDWARDS.....	CANFIELD, Mahoning County.
M. L. SULLIVANT.....	COLUMBUS, Franklin County.
S. MEDARY, <i>Treasurer</i>	COLUMBUS, Franklin County.
W. CASE.....	CLEVELAND, Cuyahoga County.
P. ADAMS.....	HURON, Erie County.
R. W. MUSGRAVE.....	SULPHUR SPRING, Crawford County.

EXECUTIVE COMMITTEE.

ARTHUR WATTS, <i>President</i>	CHILLICOTHE.
M. L. SULLIVANT.....	COLUMBUS.
WM. CASE.....	CLEVELAND.

Articles will be received September 13th, 14th, and till 12 o'clock on the 15th.
Examination, by the Judges, of articles, &c., exhibited, September 15th.
General exhibition for the public, September 16th and 17th.
General sale day, September 17th.

PRICES OF ADMISSION.

Badges will be sold to Exhibitors at One Dollar, which will admit themselves and families ; also to others, which will give access to the grounds, for a gentleman and two ladies during the public Exhibition.

Single tickets will be sold at the office, at Twenty-Five Cents each, for one admission.

RULES AND REGULATIONS FOR THE FAIR.

Exhibitors are required to have their articles entered on the books at the business office, before they are placed within the enclosure. On the entry of the articles and animals, cards will be furnished with the number and class, as entered at the office, which are to be placed on the animal or article to be exhibited. No article exhibited shall be removed before the close of the exhibition, without the permission of some member of the Executive Committee. Every exhibitor should have his articles on the grounds early on Wednesday, the 15th, and if delayed beyond 12 o'clock, M., they cannot come in competition for premiums.

Applicants for premiums should pay particular attention to the requirements for *Fat Cattle, Milch Cows, Fat Sheep, Shepherd's Dog, Plows, Butter, Cheese, Honey, Sugar, &c.*

Applicants for premiums on field crops, must send in their statements as required, to the office of the Board, at Columbus, previous to the annual meeting of the Board, on the first Wednesday after the first Monday of December, 1852.

For premiums in the class of *Horses and Cattle*, open to all, as well as foreign *Horses and Cattle*, it is expected different breeds of animals will be brought into competition with each other. The awards to be made in favor of the animals which approach the *nearest to the standard of perfection for their various breeds and classes.*

JUDGES.

The Judges are requested to report themselves on their arrival, at the rooms of the Board, or at the business office, on the grounds. The Judges will meet at the speaker's tent, at 11 o'clock, on the 15th September, when their names will be called, vacancies supplied, and they will then enter upon their duties. They are requested to make their reports to the Secretary, at the business office, as early as practicable. The reports must all be made by 3 o'clock, P. M., on the 16th.

INSTRUCTIONS TO JUDGES.

The Judges on animals will have regard to the symmetry, early maturity, size, and general characteristics of the breeds which they judge. They will make proper allowances for age, feeding, and other circumstances of the character and condition of the animals. *They are expressly required not to give encouragement to over-fed animals.* No premiums are to be awarded to Bulls, Cows, or Heifers, which

shall appear to have been fattened for the butcher ; the object being to have superior animals of this description for breeding.

No person whatever will be allowed to interfere with the Judges during their adjudications.

The Judges on stock, if not satisfied as to the regularity of the entries in their respective classes, will apply to the Secretary for information ; and should there be any doubt, after examination, of their coming within the regulations ; or, if any animal is of such a character as not to be entitled to exhibition in competition, they will report the fact to the Executive Committee, that such course may be adopted as the case may require.

FAT CATTLE.

The Judges on Fat Cattle will give particular attention to the animals submitted to examination. It is believed, that all other things being equal, those are the best cattle that have the greatest weight in the smallest superficies. The Judges will require all the cattle in this class to be weighed, and will take measures to give the superficies of each, and publish the result with their reports. *They will also (before awarding any premiums) require of the competitors full statements as to the manner and cost of feeding, as required by the regulations of the premium list.*

GENERAL RULES APPLICABLE TO ANIMALS.

When there is but one exhibitor, although he may show several animals in a class, only one premium will be awarded ; that to be first, or otherwise, as the merits of the animal may be adjudged. *A premium will not be awarded when the animal is not worthy, though there be no competition.*

REPORTS.

The Judges, (especially those on animals), will be expected to give the *reasons of their decisions*, embracing the valuable and desirable qualities of the animals or articles to which premiums are awarded.

DISCRETIONARY PREMIUMS.

No viewing committee shall award any discretionary premiums. Whenever, however, articles of merit, superior in their character, are presented, and which are entitled to special commendation, the judges are desired to notice them particularly, and refer them to the consideration of the Board, at a subsequent meeting of the Board.

An address will be delivered under the speaker's tent, on Thursday afternoon the 16th of September, at 3 o'clock, precisely.

REPORTS OF JUDGES.

The Reports of the Judges will be read on Friday, and the premiums in plate will be paid by the Treasurer, on the order of the President. Other premiums will be paid on Friday and Saturday, at the office room of the Board.

The press throughout the State and the West, are respectfully invited to notice the time of holding the State Fair, and give such additional editorial notice as will call the attention of their readers to the subject.

ROOMS OF THE OHIO STATE BOARD OF AGRICULTURE,
COLUMBUS, O., *January 7, 1852.*

The Ohio State Board of Agriculture met pursuant to adjournment.

All the members of the Board were present.

Communications from several State Agricultural societies were laid before the Board.

The fair of Kentucky will be held on the 15th, 16th and 17th of September.

The fair of Ohio will be held on the 15th, 16th and 17th of September.

The fair of Michigan will be held on the 22d, 23d and 24th of September.

Various matters were acted on, and the Board then proceeded to the consideration of the premium list.

Mr. Springer moved the following resolution :

Resolved, That we offer \$50 for the best Short Horn Bull, over three years old.

Ordered.

Second best Short Horn Bull, \$25. Ordered.

Mr. Springer also moved as follows :

Resolved, That we will offer for the best Devon Bull, over three years old, a premium of \$50 ; which was ordered.

Second best do \$25 ; which was ordered.

LIST OF PREMIUMS to be awarded at the Third Ohio State Fair, to be held at Cleveland, on the 15th, 16th, and 17th of September, 1852, under the direction of the Ohio State Board of Agriculture.

CLASS A.

PREMIUMS ON CATTLE—OHIO.

I. — *Short Horns.*

Best bull over 3 years old	\$50 00
Second best do	25 00
Best 2 years old bull	15 00
Second best do	10 00
Best 1 year old bull	10 00
Second best do	5 00
Best bull calf	10 00
Second best do	5 00
(Females same.)	

AWARDING COMMITTEE.

E. P. Prentice	Albany, N. Y.
Benjamin Warfield	Lexington, Ky.
Lewis F. Allen	Buffalo, N. Y.
James Vause	Chillicothe, O.

II.—*Devons.*

Best bull over 3 years	\$50 00
Second best do	25 00
Best bull over 2 years	15 00
Second best do	10 00
Best bull over 1 year	10 00
Second best do	5 00
(Females same.)	

AWARDING COMMITTEE.

James Wadsworth	Genesee, N. Y.
E. N. Giddings	Cleveland, O.
Asa Baldwin	Boardman, O.
Judge Selden Graves	Wetmore, Seneca co., O.
Isaac Dillon	Zanesville, O.

III & IV.—*Herefords and Ayreshires.*

Best bull over 3 years.....	\$20 00
Best bull over 2 years.....	10 00
Best bull over 1 year.....	10 00
(Females same.)	

AWARDING COMMITTEE ON HEREFORDS AND AYRESHIRE.

John Hadley.....	Clarksville, O.
George Howliston.....	Willoughby, O.
Abner Root.....	Berlin, Erie co., O.
Capt. Stanhope.....	Williamsfield, O.
Abel Renick.....	Wyandot, Kinsman, P. O., O.

V.—*Native, and cross between Native and Improved Cattle.*

Best cow over 3 years	\$25 00
Second best do	15 00
Best heifer 2 years	15 00
Second best do	10 00
Best heifer 1 year.....	10 00
Second best do	5 00
Best calf	5 00
Second best do	3 00

AWARDING COMMITTEE ON NATIVES, CROSSES, &C.

Wm. Vance.....	Urbana, O.
John Crouse.....	Chillicothe, O.
Alexander Renick.....	Chillicothe, O.
John Newton.....	Richfield, Summit co., O.
Thomas Kinsman	Kinsman, O.

VI.—*Working Oxen and Steers.*

Best ten yoke of oxen from one county	\$50 00
Second best do do	25 00
Best yoke of oxen over 4 years	25 00
Second best do do	15 00
Best yoke of oxen under 4 years.....	20 00
Second best do do	10 00

AWARDING COMMITTEE ON WORKING OXEN.

Nathan Dustin	Galena, O.
Judge Frederick Steers.....	Bronson, Huron co., O.
H. Hurd.....	Aurora, O.
Warren Hine.....	Canfield, O.
Dennis McConnel	Chillicothe, O.

VII.—*Fat Cattle, of any Breed.*

Best fat bullock 5 years, or older	\$25 00
Best do 4 and under 5	20 00
Best do 3 and under 4	15 00
Best do 2 and under 3	10 00
Best do 1 and under 2	8 00
Best cow 4 years old	15 00
Best do under 4 and over 3 years old	10 00

AWARDING COMMITTEE ON FAT CATTLE.

Norman C. Baldwin	Cleveland, O.
Richard Cowling	Columbus, O.
Seth Bushnell	London, O.
Jesse Bush	Frankfort, O.
Buckley Steedman	Cleveland, O.

VIII.—*Grass Fed Cattle—for Beef.*

Best fat bullock 5 years or over	\$10 00
Best do 4 years and over	8 00
Best do 3 years and over	6 00
Best do 2 years and over	4 00
Best do 1 year and over	3 00

IX.—*Grass Fed Fat Cows.*

Best cow 5 years or over	\$10 00
Best cow 3 years or over	8 00

AWARDING COMMITTEE.

Alexander Waddle	South Charleston, O.
A. J. Caldwell	Danville, Ky.
O. M. Oviatt	Richfield Summit co., O.
A. R. Seymour	Washington, O.
Eli Gwynne	Columbus, O.

X.—*Milch Cows.*

Best milch cow	\$20 00
Second best milch cow	15 00

AWARDING COMMITTEE.

Caleb Hall	Blue Rock, O.
John Hall	Rockport, O.
Joshua Hadley	Clarksville, O.
N. E. French	Lenox, Ashtabula co., O.
John Haughey	Jamestown, Greene co., O.

FOREIGN CATTLE.

XI.—*Premiums for Stock from other States.*

Best bull over 3 years, of any breed, diploma and.....	\$20 00
2d best do do do	10 00
Best bull 2 years, diploma and.....	10 00
2d best do	5 00
Best bull 1 year old, diploma and.....	8 00
2d best do	4 00
Best bull calf, diploma and.....	5 00
2d best do	3 00
Best cow over 5 years old, diploma and.....	15 00
2d best do do	10 00
Best heifer 2 years old, diploma and.....	10 00
2d best do do	5 00
Best 1 year old heifer, diploma and.....	5 00
2d best do do	3 00
Best heifer calf, diploma and.....	5 00
2d best do	3 00

AWARDING COMMITTEE ON FOREIGN STOCK.

R. R. Seymour.....	Bainbridge, Ohio.
Felix Renick.....	Bloomfield, Pickaway county, Ohio.
James Trimble.....	Hillsborough, Ohio.
Jonathan Farrar.....	Jefferson, Madison county, Ohio.
E. R. Welch.....	Bucyrus, Ohio.

XII.—*Sweepstakes.—Premiums open to all.*

Best bull over 3 years old, a cup of the value of.....	\$10 00
Best bull over 2 years old, do do	10 00
Best bull over 1 year old, do do	10 00
Best cow over 3 years old, do do	10 00
Best heifer over 2 years, do do	10 00
Best heifer over 1 year, do do	10 00
Best bull calf, do do	10 00
Best heifer calf, do do	10 00

AWARDING COMMITTEE.

Henry Parsons.....	Guelph P. O., Canada West.
John I. Vanmetre.....	Piketon, Ohio.
Isaac Cunningham.....	Portsmouth, Ohio.
George Moore.....	Point Pleasant, Va.
E. Florence.....	Circleville, Ohio.

Ordered, that no animal can be open to compete for sweepstakes, unless entered and ticketed as sweepstakes.

CLASS B.

HORSES.

XIII.—Class I.—Blood Horses.

Best stallion, thorough bred, over 4 years old.....	\$40 00
Second best do do do do	20 00
Best brood mare over 4 years old.....	20 00
Second best do do	10 00
Best stallion colt over 3 years old.....	15 00
Second best do do	10 00
Best filly over 3 years old.....	10 00
Second best do do	5 00
Best stallion colt over 2 years old.....	10 00
Second best do do	8 00
Best filly over two years old.....	8 00
Second best do do	5 00
Best stallion colt over 1 year old.....	8 00
Second best do do	5 00
Best mare colt over 1 year old.....	5 00
Second best do do	3 00

AWARDING COMMITTEE.

Hon. Thomas W. Bartley.....	Mansfield, Ohio.
John S. Rappee.....	Little Sandusky, Ohio.
J. Madison Trimble.....	Hillsborough, Ohio.
Wm. Marshall Anderson.....	Chillicothe, Ohio.
Harvey Darlington.....	Zanesville, Ohio.

Undoubted pedigree of all blooded horses exhibited, must be furnished to the committee.

XIV.—Class II.—Horses of all Work.

Best stallion for all work, over 4 years old.....	\$30 00
Second best do do do	10 00
Best brood mare, and foal by her side, 4 years old.....	20 00
Second best do do do	10 00
Best mare or gelding.....	10 00

AWARDING COMMITTEE.

John Holloway.....	Henderson, Ky.
Edwin Morse.....	Poland, Ohio.
Benjamin Blake.....	Columbus Ohio.
John Scott, Jr.....	Hayesville, Ohio.
P. N. O. Banion.....	Utica, Ohio.

XV.—Class III.—*Draught Horses.*

Best stallion for draught, 3 years and over.....	\$30 00
do do 2 do	15 00
do do 1 do	10 00
do colt.....	5 00
Best gelding.....	10 00
Mares and filleys, same as stallions.	

AWARDING COMMITTEE.

Wm. Porter.....	Austintown, Orange P. O., Ohio.
E. Brown.....	Leesburg, Highland county, Ohio.
Philip Sidle.....	Irville, Muskingum county, Ohio.
Dr A. Toland.....	London, Ohio.
George McCullough.....	Wintersville, Ohio,

XVI.—Class IV.—*Matched Horses and Geldings.*

Best pair matched horses.....	\$20 00
Second best do	10 00

AWARDING COMMITTEE.

Judge H. J. Cox.....	Zanesville, Ohio.
J. K. Curtis.....	Cleveland, Ohio.
Col. William Rayne.....	Youngstown, Ohio.
D. Tallmadge.....	Lancaster, Ohio.
J. T. Brazee.....	Lancaster, Ohio.

XVII.—Class V.—*Geldings and Mares.*

Best gelding for light harness, 4 years and over.....	\$10 00
do do do 3 do	Silv. medal
do do do 2 do	" "
do saddle, 4 do	\$10 00
do do 3 do	Silv. medal
do do 2 do	" "
Mares and filleys, same.	

Awarding Committee same as Class IV.—(XVI.)

XVIII.—*Jacks and Mules.—Ohio.*

Best jack, not less than 15 hands high.....	\$40 00
Second best jack, not less than 14½ hands high.....	20 00
Best jennet.....	20 00
Second best jennet.....	10 00
Best pair of mules, 3 years old and over.....	20 00
Second best do do do	10 00
Best single mule over 2 years old.....	10 00
Second best do do do	5 00

Best single mule over 1 year old.....	\$10 00
Second best do do	5 00
Best mule colt.....	8 00
Second best do.....	5 00

AWARDING COMMITTEE.

John Kinsman.....	Warren, Trumbull county, Ohio.
Judge Linson.....	South Charleston, Ohio.
Gen. B. Harrison.....	Duffa Fork, Ohio.
Abram Hegler.....	Frankfort, Ross county, Ohio.
William Myers.....	Woodfield, Jefferson county, Ohio.

XIX.—*Premiums on Horses from other States.*

Best stallion over 4 years old.....	Silver medal.
Second best do do	Bronze "
Best brood mare.....	Silver "
Second best do.....	Bronze "

AWARDING COMMITTEE.

J. M. Sherwood.....	Auburn, N. Y.
Gov. Wright.....	Indianapolis, Ia.
Gov. Mordecai Bartley.....	Mansfield, Ohio.
Frank Chambers.....	Cincinnati, Ohio.
William H. Sholl.....	Cleveland, Ohio.

XX.—*Horses, Jacks, and Mules.—Open to all. (Sweepstakes.)*

Best stallion.....	Silver medal.
Best jack.....	" "
Best brood mare.....	" "
Best jennet.....	" "

Awarding committee same as the preceding.

 CLASS C.

PREMIUMS ON SHEEP.—OHIO.

XXI.—*Class I.—Long Woolled.—Bakewell, Leicestershire, &c.*

Best buck over 2 years old.....	\$10 00
Second do do	5 00
Best buck under 2 years old.....	10 00
Second do do	5 00

Best pen of 5 ewes over 2 years old.....	\$10 00
Second do do do	5 00
Best pen of 5 ewes under 2 years old.....	10 00
Second do do do	5 00
Best pen of 5 ewe lambs.....	5 00
Second do do	3 00

AWARDING COMMITTEE.

Josiah Copeland.....	Marion, Ohio.
A. E. Strickle.....	Wilmington, Ohio.
Van R. Humphrey.....	Hudson, Ohio.

XXII.—Class II.—Middle Woolled.—South Down, Norfolk, &c.

(Same Premiums as above.)

Best buck over 2 years old.....	\$10 00
Second do do	5 00
Best buck under 2 years old.....	10 00
Second do do	5 00
Best pen of 5 ewes over 2 years old.....	10 00
Second do do do	5 00
Best pen of 5 ewes under 2 years old.....	10 00
Second do do do	5 00
Best pen of 5 ewe lambs under 2 years old.....	5 00
Second do do do do	3 00

AWARDING COMMITTEE.

Joseph K. Wing.....	North Bloomfield, Ohio.
W. A. Adams.....	Huron, Erie county, Ohio.
J. F. Willis.....	Duff's Fork, Fayette co., O.

XXIII.—Class III.—Merinoes and their Grades.

Best buck over 2 years old.....	\$12 00
Second do do	5 00
Best buck under 2 years old.....	10 00
Second do do	5 00
Best pen of 5 ewes over 2 years old.....	10 00
Second do do do	5 00
Best pen of 5 ewes under 2 years old.....	10 00
Second do do do	5 00
Best pen of five ewe lambs.....	5 00
Second do do	3 00

AWARDING COMMITTEE.

Gen. G. A. Jones.....	Mt. Vernon, Ohio.
A. R. Howard.....	Zanesville, Ohio.
Fred'k K. Otis	Berlinville, Erie co., O.

XXIV.—Class IV.—Saxons and their Grades.

(Same Premiums as above.)

Best buck over 2 years old.....	\$12 00
Second do do	5 00
Best buck under 2 years old.....	10 00
Second do do	5 00
Best pen of 5 ewes over 2 years old.....	10 00
Second do do do	5 00
Best pen of 5 ewes under 2 years old.....	10 00
Second do do do	5 00
Best pen of 5 ewe lambs.....	5 00
Second do do	3 00

AWARDING COMMITTEE.

J. T. Pugsley.....Convenience P. O., Fayette co., Ohio.
 Stephen Arnold.....Melbourne, Seneca county, Ohio.
 A. Miller.....Etna, Licking county, Ohio.

XXV.—FAT SHEEP.

Long Woored—over three years old.

Best fat sheep..... \$5

Lang Woored—two years, or under.

Best fat sheep..... \$5 00

Middle Woored—over two years.

Best fat sheep..... \$5 00

Middle Woored—two years, or under.

Best fat sheep..... \$5 00

AWARDING COMMITTEE.

Richard Norton.....Cleveland, Ohio.
 B. F. Perkins.....Rochester, Lorain county, O.
 John Bingham.....Ellsworth, Ohio.

XXVI. FOREIGN SHEEP.

PREMIUM FOR SHEEP FROM OTHER STATES.

Long Woaled.

Best buck	Diploma.
Best pen of 5 ewes	do
Best pen of 5 buck lambs	do
Best pen of 5 ewe lambs	do

Middle Woaled.

Best buck	Diploma.
Best pen of 5 ewes	do
Best pen of 5 buck lambs	do
Best pen of 5 ewe lambs	do

AWARDING COMMITTEE.

Samuel Perkins	Akron, O.
George Lauck	Bucyrus, O.
Harry Chase	Milan, O.

XXVII. *Merinoes and their Grades.*

Best buck	Diploma.
Best pen of 5 ewes	do
Best pen of 5 buck lambs	do
Best pen of 5 ewe lambs	do

Saxons and their Grades.

Best buck	Diploma.
Best pen of 5 ewes	do
Best pen of 5 buck lambs	do
Best pen of 5 ewe lambs	do

AWARDING COMMITTEE.

Philo Buckingham	Zanesville, O.
Chester Bidwell	Warren, O.
John Baker	Melmore, Seneca co. O.

SWEEPSTAKES.

XXVIII. *Sheep.—Premiums open to all.*

Best long wooled buck	Diploma.
Best middle wooled buck	do
Best Merino buck	do
Best Saxon buck	do
Best pen of 5 ewes, long wooled	do
Best pen of 5 ewes, middle wooled	do
Best pen of 5 ewes, Merinoes	do
Best pen of 5 ewes, Saxons	do
Best pen of 5 buck lambs	do
Best pen of 5 ewe lambs	do

AWARDING COMMITTEE.

Moses Chapman Perrysburg, Wood co., O.
 John Brown Akron, O.
 Adam Hildebrand Massillon, O.

XXIX. *Shepherd's Dog.—Open to all.*

Best Shepherd's dog Silver Medal
 Second do Diploma.

AWARDING COMMITTEE.

Ohio State Board of Agriculture will act as the committee.

CLASS D.

XXX. *Class I.—Swine.—Ohio.*

Best boar over 2 years old	\$10 00
Second do do	5 00
Best boar 1 year old	10 00
Second do do	5 00
Best boar 6 months, and under 1 year	8 00
Second do do do	5 00
Best breeding sow over 2 years	10 00
Second do do do	5 00
Best breeding sow 1 year old	10 00
Second do do do	5 00
Best sow 6 months, and under 1 year	8 00
Second do do do	5 00
Best lot of pigs not less than 5 and under 10 months	10 00
Second do do do do do	5 00

AWARDING COMMITTEE.

Jeremiah Crouse Chillicothe, O.
 Andrew Poe Chillicothe, O.
 Wm. L. Miner Columbus, O.

XXXI. *Class II.—Foreign Hogs.*

Same as class (I) except diplomas are to be awarded, but no money.

AWARDING COMMITTEE.

Same committee as on Ohio swine.

General Rules Applicable to Animals.

When there is but one exhibitor, although he may show several animals, in any class, or subdivision of a class, *only one premium* will be awarded—that to be first, or otherwise, as the merit of the animal may be adjudged by the committee; and a premium will not be awarded where the animal is not worthy, though there be no competition.

CLASS E.

XXXII—Poultry—Open to all.

Best lot of Dorkings, not less than three—1 cock and 2 hens	....	Bronze Medal.
Best lot of Polands	.....	do
Best pair of wild turkies	.....	do
Best lot of turkies, not less than three	.....	do
Best lot of Muscovy ducks, not less than three	.....	do
Best lot of any other distinct breed	.....	do
Best lot of game cocks and hens	.....	do
Best pair of Silesian ducks	.....	do
Best lot of small ducks	.....	do
Best lot of Guinea hens, not less than six	.....	do
Best pair of China geese	.....	do
Best pair of large geese	.....	do
Best pair of wild geese	.....	do
Best lot of poultry, owned by exhibitor, (statement to be furnished and verified)	.....	do
Best exhibition of pigeons	.....	do

AWARDING COMMITTEE.

B. Huxley	.....	Cincinnati, O.
Alexander McGinnis	.....	Chillicothe, O.
Lyman Scott	.....	Milan, Erie co., O.

CLASS F.

XXXIII—Farm Implements.—No I.—(Open to all)—Plows.

Best plow for general purposes, furrows 6 inches by 10	.....	Silver Medal.
Best plow for clay soils, furrows 6 by 10 inches	.....	do
Best plow for light sandy soils, furrows 6 by 12 inches	.....	do
Best steel plow (for black muck or clay soils)	.....	do
Best sward plow do do	.....	do
Best subsoil plow	.....	do
Best side hill plow	.....	do

The furrow slices (except for the subsoil plow) to be lapped, and the test furrow to be the third cut, and turned by the same plow. The plows to be held by the competitors or persons appointed by them.

The manner of construction, materials, workmanship, durability, and price to be considered; also, their capacity for lifting and turning over in the most perfect manner the greatest quantity of soil with the least resistance, and leaving a proper surface for seed and after culture.

AWARDING COMMITTEE.

W. H. Taylor.....North Bend, O.
James Johnson.....Wooster, O.
Capt. Anderson.....Hillsborough, O.

XXXIV—*Farm Implements.—No II.—Open to all.*

Best farm wagon for all purposes	Silver Medal.
Best spring wagon for marketing purposes	do
Best reaping machine.....	do
Best mowing machine.....	do
Best corn stalk roller and cutter.....	do
Best horse power for general purposes	do
Best threshing machine	do
Best portable saw mill.....	do
Best corn and cob mill.....	do
Best hemp and flax dressing machine.....	do

AWARDING COMMITTEE.

Lewis W. Sifford.....Chillicothe.
James Alexander.....Painesburgh, Summit co. O. .
John Keiler.....Bellbrook, O.

XXXV—*Farm Implements—No. III.—Open to all*

Best harrow	Silver Medal.
Best clod crusher and roller combined.....	do
Best field roller.....	do
Best wheat drill, not less than six drills	do
Best broad cast sowing machine	do
Best horse rake.....	do
Best corn planter	do
Best seed planter for hand or horse power.....	do
Best wheat cultivator—two horses	do
Best corn cultivator—one horse.....	do
Best fanning mill.....	do
Best clover seed hulling machine.....	do
Best hay rigging.....	do
Best hay press.....	do

AWARDING COMMITTEE.

Wm. H. Trimble Hillsborough, O.
 Judge James Myers Toledo, O.
 Wm. B. Hilman Bedford, Cuyahoga co., O.

XXXVI.—*Farm Implements.—No. IV.—Open to all.*

Best corn sheller for horse power	Silver Medal.
Best corn sheller for hand power	do
Best straw and hay cutter	do
Best corn stalk cutter	do
Best vegetable [root] cutter	do
Best churn	do
Best cheese press	do
Best bee hive	do
Best potato washer	do
Best washing machine	do

AWARDING COMMITTEE.

D. B. Kinney Oberlin, O.
 David McIntosh Shalersville, O.
 John Davenport Woodsfield, Monroe co., O.

XXXVII.—*Implements and Manufactured Wares.—Open to all.*

Best three grain cradles	Diploma and	\$5 00
Best six hand rakes	do	2 00
Best six hay forks	do	2 00.
Best six grass scythes	do	2 00
Best six cradle scythes	do	2 00
Best six manure forks	do	2 00
Best lot of grain measures	do	2 00
Best lot of butter tubs and firkins	do	2 00
Best wash board	do	1 00
Best one dozen corn brooms	do	2 00
Best plow harness	do	3 00
Best wagon harness for farm	do	5 00
Best carriage harness	do	10 00
Best saddle and bridle for general purposes	do	5 00
Best half dozen axes	do	3 00
Best and most numerous variety of agricultural implements	Diploma.	
Best and most numerous variety of agricultural implements manufactured in the State of Ohio, by the exhibitor, or under his supervision, materials, workmanship, utility, durability and prices to be considered in both cases		\$20 00
Best church bell	Silver Medal.	
Best steamboat bell	do	
Best hotel signal bell	Diploma.	

AWARDING COMMITTEE.

Lemuel Moss Portsmouth, O.
 H. W. Gillett Quaker Bottom, Lawrence co., O.
 S. C. Haver Putnam, O.

XXXVIII—*Plowing Match.*—*Open to all.*

First premium	\$10 00
Second premium	5 00

The furrow slice to be not less than 6 inches deep.

Open to Plow-boys under twenty-one years of age.

First premium	\$10 00
Second premium	5 00

AWARDING COMMITTEE.

Thomas Tate	Cuyahoga, O.
James Lewis	Bucyrus, O.
Julius S. Pritchard	Brunswick, Medina co., O.

CLASS G.

PRODUCTS OF THE FARM, DAIRY, &c.

XXXIX—*Wool.*—*Open to all.*

Best fleece of fine wool	Diploma:
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To be exhibited by the grower.

Best fleece coarse wool	Diploma.
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AWARDING COMMITTEE.

David Sexton	Mansfield, O.
John Metcalf	Zanesville, O.
Isaac Paist	S. Charleston, Clark co., O.

XL—*Salt.*

Best barrel (Ohio)	Diploma.
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To be exhibited by the maker.

Flour.

Best barrel (Ohio manufactured, and wheat)	Diploma and \$5 00
Second best do do	Diploma and 3 00

To be exhibited by the manufacturer, with a statement of the variety and quantity of wheat necessary to make it.

AWARDING COMMITTEE—FLOUR AND SALT.

E. C. Floyd.....Cleveland.
 G. Lofland.....Cambridge, Guernsey county, O.
 James FarmerSalineville, O.

XLI— *Ohio Butter.*

Best lot of ten pounds in rolls, made at any time.....	\$5 00
2d best do do do	3 00
Best lot, not less than 25 pounds, made in May or June.....	5 00
2d best do do do do	3 00
Best tub or firkin, not less than 50 lbs., made at any time	5 00
2d best do do do do	3 00

The competitors must state, in writing, the time when it was made; the number of cows, and whether any other food than grass was given them; the treatment of the milk before churning; mode of churning and freeing the butter from the milk; the quantity and kind of salt used; and whether saltpetre or any other substance has been employed.

Ohio Bread.

Best three loaves of baker's bread.....	\$3 00
2d best do do do	2 00
Best three loaves of domestic bread.....	3 00
2d do do do	2 00

Ohio Hams.

Best six hams.....	\$5 00
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AWARDING COMMITTEE—BREAD, BUTTER AND HAMS.

Dr. Robinson.....Bedford.
 Matthew TurnerShelby.
 Thomas HamiltonMilan.

XLII.— *Ohio Cheese.*

Best Cheese, one year old and over.....	Diploma and \$5 00
Second best Cheese, do	3 00
Best Cheese, under one year old.....	Diploma and 5 00
Second best Cheese, do	3 00
Best cream cheese, (manufacturer to state the process.....	Diploma and 3 00
Best pine apple cheese, do do do	Diploma and 3 00

Competitors must state, in writing, the time it was made; the number of cows kept; whether the cheese was made from one, two, or more milkings; whether any addition is made of cream; the quantity of rennet used, and the mode of preparing it; the mode of pressure, and the treatment of the cheese afterwards.

AWARDING COMMITTEE.

Gov. S. Ford.....Chardon, Ohio.
 D. Taylor.....Geauga County, Ohio.
 Eliphas Burnham.....Woodstock, Ohio.

XLIII.—HONEY AND SUGAR—OHIO.

Honey.

Best ten pounds.....\$5 00

The honey to be taken without destroying the bees. Kind of hive to be specified.

Sugar.

Best ten pounds maple sugar.....\$3 00

The process of manufacturing and clarifying to be stated in writing.

AWARDING COMMITTEE.

C. J. Sherman.....Mansfield.
 Daniel Bonsall.....New Albany, Mahoning county.
 John S. Cock.....Canton, Stark county, Ohio.

XLIV.—GRAIN—OHIO.

Best sample of	wheat, not less than one bushel.....	Silver Medal.
Best do	rye, not less than one bushel.....	Silver Medal.
Best do	oats, not less than one bushel.....	Silver Medal.
Best do	barley, not less than one bushel.....	Silver Medal.
Best do	Indian corn, two bushels of ears.....	Silver Medal.
Best do	buckwheat, one bushel.....	Silver Medal.
Best do	flaxseed, one bushel.....	\$3 00
Best do	hops, not less than ten pounds.....	2 00
Best do	timothy seed, one bushel.....	3 00
Best do	clover seed, one bushel.....	3 00
Best collection of	different varieties of seed corn.....	Silver Medal.

AWARDING COMMITTEE ON GRAIN.

Buckley Comstock.....Worthington.
 David Baggs.....New Lisbon.
 H. H. Coit.....Cleveland.

CLASS H.

XLV.—SILK. (*Open to all.*)

Best specimen of manufactured, not less than five yards.....	Diploma and	\$5 00
Best pound of reeled silk, made in family.....	Diploma and	3 00
Best pound of sewing silk, made in family.....	Diploma and	3 00
Best half bushel cocoons, made in family.....	Diploma and	3 00

AWARDING COMMITTEE.

John A. Blair.....	Zanesville.
Mrs. John A. Wheeler.....	Cleveland.
Mrs. Snowden.....	Columbus.
Mrs. John Kelly.....	Cleveland.

XLVI.—DOMESTIC MANUFACTURES—OHIO.

Best ten yards woolen cloth, made in Ohio.....	\$10 00
Second best ten yards woolen cloth, made in Ohio.....	5 00
Best ten yards satinnet, made in Ohio.....	8 00
Second best ten yards satinnet, made in Ohio.....	5 00
Best ten yards of jeans.....	5 00
Second best ten yards of jeans.....	3 00
Best pair woolen blankets.....	5 00
Second best pair woolen blankets.....	3 00
Best ten yards flannel.....	5 00
Second best ten yards flannel.....	3 00
Best woolen carpet, fifteen yards.....	5 00
Second best woolen carpet, fifteen yards.....	3 00
Best ten yards linen.....	5 00
Second best ten yards linen.....	3 00
Best ten yards linen diaper.....	5 00
Second best ten yards linen diaper.....	3 00
Best ten yards kersey.....	5 00
Second best ten yards kersey.....	3 00
Best fifteen yards tow cloth.....	5 00
Second best fifteen yards tow cloth.....	3 00
Best hearth rug.....	5 00
Second best hearth rug.....	3 00
Best rag carpet, fifteen yards.....	5 00
Second best rag carpet, fifteen yards.....	3 00
Best double carpet coverlet.....	5 00
Second best double carpet coverlet.....	3 00
Best pair of woolen knit stockings.....	2 00
Second best pair of woolen knit stockings.....	1 00
Best pair of cotton wove stockings.....	2 00
Second best pair of cotton wove stockings.....	1 00
Best pair of linen knit stockings.....	2 00
Second best pair of linen knit stockings.....	1 00
Best pair of cotton knit stockings.....	2 00
Second best pair of cotton knit stockings.....	1 00
Best pair of linen wove stockings.....	2 00

Second best pair of linen wove stockings	\$1 00
Best pound of linen sewing thread	2 00
Second best pound of linen sewing thread	1 00
Best pair of woolen fringe mittens	2 00
Second best pair of woolen fringe mittens	1 00

Discretionary premiums will be recommended on articles of merit not included in the above list.

AWARDING COMMITTEE.

Jacob H. Eaton	Salem.
S. W. Bott	Peru.
J. K. Goodwin	Kenton.

XLVII.—AMERICAN MANUFACTURES.

** Open to all.*

Best piece of black broadcloth, not less than ten yards	Diploma.
Best piece of blue broadcloth, not less than ten yards	Diploma.
Best piece of woolen carpet, manufactured in factory, not less than ten yds	Diploma.
Best piece of satin, ten yards	Diploma.
Best piece cotton shirting, bleached, ten yards	Diploma.
Best piece of cotton shirting, unbleached, ten yards	Diploma.
Best piece of oil cloth, ten yards	Diploma.
Best piece of prints, ten yards	Diploma.
Best piece of Mousselin de Laines, ten yards	Diploma.
Best piece black broadcloth, from American wool, ten yards	Diploma.
Best piece blue broadcloth, from American wool, ten yards	Diploma.

Diplomas will be recommended for articles of merit, not included in the above list.

AWARDING COMMITTEE.

Henry W. Clark	Cleveland.
Cyrus Prentice	Ravenna.
John Reber	Lancaster.

XLVIII.—NO. 1.—NEEDLE, SHELL, AND WAX WORK.—OHIO.

Best ornamental needle work	Diploma and \$3 00
Best ottoman cover	Diploma and 3 00
Best table cover	Diploma and 3 00
Best group of flowers	Diploma and 3 00
Best variety of worsted work	Diploma and 3 00
Best fancy chair work with needle	Diploma and 3 00
Best worked cushion and back	Diploma and 3 00
Best worked collar and handkerchief	Diploma and 3 00
Best woolen shawl	Diploma and 3 00

Second best woolen shawl.....	Diploma and	\$2 00
Best worked quilts.....	Diploma and	3 00
Best white quilts.....	Diploma and	3 00
Best silk patch work quilts.....	Diploma and	3 00
Best port folios, worked.....	Diploma and	3 00
Best silk bonnets.....	Diploma and	3 00
Best straw bonnets.....	Diploma and	3 00
Best lace capes.....	Diploma and	3 00
Best lamp-stand mats.....	Diploma and	3 00
Second best lamp-stand mats.....	Diploma and	2 00
Best ornamental shell work.....	Diploma and	3 00
Second best ornamental shell work.....	Diploma and	2 00
Best specimen wax flower.....	Diploma and	3 00
Second best specimen wax flower.....	Diploma and	2 00

Discretionary premiums will be recommended for articles of merit, not included in the above list.

AWARDING COMMITTEE FOR NEEDLE, SHELL, AND WAX WORK.

John E. Lyon.....	Cleveland, Ohio.
Mrs. Maria Medary.....	Cleveland, Ohio.
Miss Mary P. Hall.....	Poland, Ohio.
Mrs. L. Langmore.....	Bedford, Ohio.
Mrs. J. T. Pugsley.....	Convenience P. O., Fayette co., O

XLIX.—PAINTINGS AND DRAWINGS.

Open to all.

Best specimen of animal painting in oil, by American artist.....	\$10 00
Best specimen of animal painting, water colors, by American artist.....	Silver Medal.
Best specimen of animal painting in oil, by foreign artist.....	Silver Medal.
Best specimen of animal painting, water color, by foreign artist.....	Diploma.
Best specimen of fruit painting.....	Silver Medal.
Best specimen of flower painting.....	Silver Medal.
Best specimen of cattle drawing.....	Silver Medal.
Best specimen of monochroms.....	Diploma.
Best specimen of daguerreotypes.....	Diploma.
Best specimen of talbotypes.....	Diploma.
Best drawing of fair grounds, for Board of Agriculture.....	Silver Medal.
Best specimen of Ohio landscape, in oil, by Ohio artist.....	Silver Medal.

AWARDING COMMITTEE.

Joseph Sullivant..	Columbus, O.
W. Adams.....	Cincinnati, O.
Hamilton Smith.....	Cleveland, O.
S. D. Harris.....	Columbus, O.
J. T. Worthington.....	Chillicothe, O.

L.—DESIGNS.

Open to all.

Best design for farm house.....	Diploma.
Best design of farm barn.....	Diploma.
Best design of dairy house.....	Diploma.
Best design of poultry house.....	Diploma.
Best design of ice house.....	Diploma.
Best design of milk house.....	Diploma.
Best design of dry house.....	Diploma.
Best design of smoke house.....	Diploma.
Best design of farm gate.....	Diploma.

Designs must be accompanied with estimates of cost and specifications. Those to which premiums may be awarded will be engraved and published in the Report of the Board of Agriculture.

AWARDING COMMITTEE.

Same committee as the paintings, &c.

LI.—STOVES.

Open to all.

Best cooking stove for wood fire.....	Diploma.
Best cooking stove for coal.....	Diploma.
Best parlor stove.....	Diploma.
Best apparatus for warming dwellings and public buildings.....	Diploma.
Best apparatus for cooking range.....	Diploma.
Best apparatus for steaming food for animals.....	Silver Medal.

AWARDING COMMITTEE.

Henry Blandy.....	Zanesville, Ohio.
Wm. Welsh.....	Chillicothe, O.
John W. Gill.....	Columbus, O.

MISCELLANEOUS. DISCRETIONARY. (*Open to all.*)LII.—No. 1. *Articles Manufactured wholly or chiefly of Metal.*

Best iron gate for farm purposes.....	Diploma.
Best ornamental cast iron vase on pedestal.....	Diploma.
Best iron wire hurdle fence.....	Diploma.

AWARDING COMMITTEE.

B. F. Conway.....	Portsmouth, Ohio.
Henry Blake.....	Ironton, Ohio.
James Linnox.....	Columbus, Ohio.

LIII.—No. 2. *Articles Manufactured wholly or chiefly of Wood.*

Best osier willow and specimen of the product manufactured.....	Diploma.
Best window shades.....	Diploma and \$3
Best window blinds.....	Diploma and 3

AWARDING COMMITTEE.

Wm. Gill.....	Columbus, Ohio.
Wm. S. Craig.....	Cleveland, Ohio.
Valentine Best.....	Putnam, Ohio.

LIV.—No. 3. *Articles made of Iron and Wood, and Articles manufactured of stone.*

Best water pipe of water lime, &c.....	Silver Medal.
Best sample of drain tile.....	Silver Medal.
Best drain pipe or drain tile machine.....	Diploma and \$15 cup.
Best water-ram and other hydraulic apparatus.....	do
Best pump for well.....	do
Best pump for cistern.....	do

A great variety of articles, machines,, &c., will be embraced under this heading of LIV, and also under the following, No. LV, of which only a few are specified.

AWARDING COMMITTEE.

J. B. Larwill.....	Bucyrus, Ohio.
Wm. Osborn.....	Vienna, Clark County, Ohio.
Francis Campbell.....	Chillicothe, Ohio.

LV.—No. 4. *General list of Articles which do not come under any preceding specified head.*

A few only are here inserted, continued from the last premium list.

Best fire engine.....	Silver Medal.
Best hose reel.....	Silver Medal.
Best garden engine.....	Diploma.
Best ornamental fountain.....	Diploma.
Best steam engine.....	Cup of \$15 value.

AWARDING COMMITTEE.

Joseph Ridgway.....	Columbus, O.
Daniel Rhodes.....	Cleveland, O.
Henry Galloway.....	Xenia, O.

Chemicals and Miscellaneous Articles. (Open to all.)

Best ivory black.....	Bronze Medal.
Best Prussian Blue.....	Bronze Medal.
Best sulphuric acid.....	Bronze Medal.
Best copal varnish.....	Bronze Medal.
Best glue.....	Bronze Medal.
Best prussiate of potash.....	Bronze Medal.
Best linseed oil.....	Bronze Medal.

Best white lead.....	Bronze Medal.
Best brushes.....	Bronze Medal.
Best gloves, (skin).....	Bronze Medal.
Best specimens of furriery.....	Bronze Medal.
Best specimens of soap.....	Bronze Medal.
Best specimens of tallow candles.....	Bronze Medal.
Best specimens of star candles.....	Bronze Medal.

Each committee, under the above general head of "miscellaneous, discretionary," is to award premiums, where they are specified, and recommend awards of silver medals, bronze medals, and diplomas, at their discretion.

DISCRETIONARY PREMIUMS,

Will be recommended for articles of merit exhibited by mechanics, in all the various branches, and it is hoped that a general exhibition will be made.

For all improvements in machinery useful to the farmer, and having valuable properties, discretionary premiums will be recommended by the committees, and awarded by the Board, at their discretion.

COMMITTEE ON CHEMICALS.

Prof. St. Johns.....	Hudson, Ohio.
Prof. F. Merrick.....	Delaware, Ohio.
Prof. Stoddard.....	Oxford, Ohio.

LVI.—MECHANICAL DEPARTMENT. .

No. 1.—Cabinet Ware. (Open to all.)

Best dressing bureau	Diploma.
Best sofa	"
Best lounge	"
Best extension table	"
Best office chair.....	"
Best set of parlor chairs.....	"
Best set of cottage furniture.....	"

AWARDING COMMITTEE.

A. Reed.....	Columbus, O.
Mr. ——— Gardner.....	Cleveland, O.
G. J. Smith	Cincinnati, O.

No. 2.—Coopers' Ware.

Best specimen of pine.....	Diploma and \$3 00
Best specimen of cedar.....	Diploma and 3 00
Best specimen of oak	Diploma and 3 00

AWARDING COMMITTEE.

Buckley Comstock	Worthington, O.
M. B. Wellman	Massillon, O.
Alex. Frazer	Chillicothe, O.

LVII.—*Crockery Ware.—Ohio Manufacture.*

Best specimens of "Rockingham ware,"	Silver Medal.
Best specimens of stone ware	Silver Medal.
Best specimen of ground glass	Diploma.
Best specimen of stained glass	Diploma.

AWARDING COMMITTEE.

H. G. Huntington	Cincinnati, O.
Leonard Hanna	New Lisbon, O.
Gen. James Loudon	Georgetown, O.

LVIII.—*Book Binding.*

Best suite of specimens	Silver Medal.
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AWARDING COMMITTEE.

David Campbell	Sandusky, O.
Charles Frethy	Canfield, O.
J. Calyer	Cleveland, O.

LIX.—*American Hardware, No. 1. (Open to all.)*

Best set of gardening tools	Diploma and \$5 00
Best bank lock	Diploma and 3 00
Best steel door lock	Diploma and 2 00
Best inside lock	Diploma and 2 00
Best door latch	Diploma and 1 00
Best window spring	Diploma and 1 00
Best gate fastenings	Diploma and 1 00
Best window shutter fastenings	Diploma and 1 00
Best door hinges	Diploma and 1 00
Best wood screws	Diploma and 1 00
Best specimens of saddlers' hardware	Diploma and 3 00
Best horse shoes	Diploma and 2 00
Best horse shoe nails	Diploma and 1 00
Best cut nails	Diploma and 1 00
Best set of coopers' tools	Diploma and 3 00
Best set of curriers' tools	Diploma and 3 00

AWARDING COMMITTEE ON AMERICAN HARDWARE, NO. 1.

Wm. Bingham	Cleveland, O.
Jeremiah Gest	Bellbrook, O.
James S. Kelly	Massillon, O.

LX. — *American Hardware, No. 2.* (Open to all.)

Best set of surgical instruments	Silver Medal.
Best set of optical instruments	Silver Medal.
Best set of dentists' instruments	Silver Medal.
Best set of mathematical and philosophical instruments	Silver Medal.
Best specimens of dentistry	Silver Medal.

AWARDING COMMITTEE ON AMERICAN HARDWARE, NO. 2.

Dr. R. Thompson	Columbus, O.
Dr. Sams	_____
Dr. Crittenden	Cleveland, O.

. — *Saddlers' and Shoemakers' Ware.* (Open to all.)

Best travelling trunk	Diploma and \$3 00
Best carpet bag	Diploma and 2 00
Best ladies' satchel	Diploma and 2 00
Best pair gents' summer boots	Diploma and 3 00
Best pair gents' winter boots	Diploma and 3 00
Best pair ladies' summer walking shoes	Diploma and 1 00
Best pair ladies' winter walking shoes	Diploma and 1 00
Best pair gents' slippers	Diploma and 1 00
Best pair ladies' slippers	Diploma and 1 00

AWARDING COMMITTEE.

Addison Pearson	Chillicothe, O.
G. W. Galloway	Findley, Hancock co., O.
James Myers	Toledo, O.

CLASS I.

LXII. — HORTICULTURAL DEPARTMENT. — (OPEN TO ALL.)

FLOWERS — *Professional List No. 1.*

	Greatest variety and quantity of cut flowers	\$5 00
Dahlias —	Greatest variety	5 00
do	Best seedling	5 00
do	Best 24 dissimilar blossoms	1 00
Roses —	Greatest variety	5 00
do	Best 24 dissimilar blossoms	1 00
do	Best seedling	1 00
Phloxes —	Best ten varieties	1 00
do	Best seedling	1 00
Verbenas —	Greatest variety and number	1 00
do	Best 12 varieties	1 00
do	Best seedling	1 00
German Asters —	Best collection	1 00
Panpies —	Best collection	1 00

AWARDING COMMITTEE.

T. M. Drake	Zanesville, O.
Mrs. Governor Wood	Cleveland, O.
Miss Augustus Bowen	Zanesville, O.
Miss Lucy Hall	Poland, O.
Wm. S. Sullivant	Columbus, O.

LXIII. — *Amateur List No. 2.*

	Greatest variety and quantity of cut flowers ..	Silver Medal.	
Dahlias —	Greatest variety	Silver Medal.	
do	Best 12 dissimilar blooms		\$3 00
Roses —	Great variety	Silver Medal.	
do	Best 12 dissimilar blooms		3 00
do	Best seedling		3 00
Phloxes —	Best 6 varieties		1 00
do	Best seedling		1 00
Verbenas —	Greatest variety		1 00
do	Best 12 varieties		1 00
do	Best seedling		1 00
Gorman Asters —	Best collection		1 00

AWARDING COMMITTEE.

Demas Adams, Jr.	Columbus, O.
Mrs. G. B. Merwin	Cleveland, O.
Mrs. Charles Pease	Cleveland, O.
Mrs. John Shelby	Cleveland, O.
Mrs. Watts	Chillicothe, O.

LXIV. — *General List.*

Best collection of green and hot house plants owned by one person	Silver Medal.	
Best floral design of living plants	Silver Medal.	
Second best		\$3 00
Best display of green house plants in bloom, owned by one person	Silver Medal.	
Best floral ornament	Silver Medal.	
Second best		3 00
Best pair hand bouquets, "flat,"		3 00
Second best		1 00
Best pair hand bouquets, "round,"		2 00
Second best		1 00
Best and largest basket bouquet, with handle		3 00
For the most beautifully arranged basket of flowers	Diploma or	3 00
Best floral exhibition by any Horticultural Society	\$10 Silver Cup.	

AWARDING COMMITTEE.

John H. James.....	Urbana, O.
Mrs. J. A. Harris	Cleveland, O.
Mrs. J. M. Edwards	Canfield, O.
Mrs. John Smith	Hillsboro', O.
Miss Mary Wood	Cleveland, O.

LXV.—FRUIT.—*Apples*:

For the greatest and best variety of good table apples, 3 of each variety, named and labelled by exhibitor.....	Diploma and \$10 00
Second best do	5 00
The best twelve varieties of table apples.....	5 00
Second best do	3 00
The best six winter varieties	3 00
Second best do	2 00
Best seedling, flavor and keeping qualities considered, description of character, and origin of the tree given; one dozen specimens to be exhibited.....	Silver Medal.

AWARDING COMMITTEE.

M. A. McIntosh.....	Cleveland, O.
John Bernard.....	Zanesville, O.
E. Cable.....	Newburgh, O.
T. Humrichhouse.....	Coshocton, O.
Joel Wood	Martin's Ferry, Belmont co., O.

LXVL—*Pears*.

For the greatest number of varieties of good pears, named and labelled, grown in the west	\$10 00
Second best do	Silver Medal.
For the best collection of first rate autumn pairs, named and labelled	Silver Medal.
Second best do	3 00
For the largest and best collection of winter pears, named and labelled	Silver Medal.
Best seedling pear, six specimens—Ohio	Diploma.

AWARDING COMMITTEE.

George Hoadley.....	Cleveland, O.
Sam'l Myers	New Lisbon, Columbiana co., O.
Geo. Hapgood	Warren, O.
Samuel Wood.....	Sheffield, Jefferson co., O.
John Miller.....	Columbus, O.

LXVII—*Peaches*.

For the best twelve varieties, labelled	Silver Cup.
For the best six varieties, labelled	Silver Medal.
For the best twelve peaches.....	Silver Medal.
For the best seedling variety, six specimens.....	Silver Medal.

AWARDING COMMITTEE.

Dr. I. G. Jones.....	Columbus, O.
Jos. C. Brand.....	Urbana, O.
Gerahom Perdue.....	Leesburgh, O.
J. Longworth.....	Cincinnati, O.
Maj. F. H. Webb.....	Newburgh, O.

LXVIII.—*Plums—Professional List.*

Best collection of plums, three specimens of each variety.....	Silver Medal.
Best 3 varieties of good plums, three specimens of each variety....	Diploma.
Best twelve plums, choise variety.....	Diploma.
Best seedling plums, with description	Diploma.

Nectarines and Apricots.

For the best and greatest number of good varieties, 3 specimens of each, labelled	Silver Medal.
For the best twelve specimens of any good variety.....	Bronze Medal.

Quinces.

For the best twelve quinces of any variety.....	Silver Medal.
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Monthly Raspberries.

For the best quart	Bronze Medal.
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AWARDING COMMITTEE.

Benj. Hodge.....	Buffalo, N. Y.
Charles Pease.....	Cleveland, O.
Lucian Buttles.....	Columbus, O.

LXIX.—*Grapes.*

For the best and mest extensive collection of good native grapes grown in open air	Silver Medal.
Second do do	Bronze Medal.
For the best three varieties of native or foreign grapes grown under glass, three bunches of each to be shown.....	Bronze Medal.
For the best dish of native grapes	Bronze Medal.
Best new seedling grape, described.....	Bronze Medal.

AWARDING COMMITTEE.

N. Longworth.....	Cincinnati, O.
F. R. Elliott.....	Cleveland, O.
Mr. Jager.....	Columbus, O.

LXX.—*Watermelons.*

For the best six specimens of any variety.....	\$3
Second do do do	2

● *Muskmelons.*

For the best six specimens of any variety.....	\$3
Second do coo do	2

Cranberries.

For the best half peck of domestic culture.....	Silver medal
Second do do do	Bronze "

AWARDING COMMITTEE ON WATERMELONS, MUSKMELONS, AND CRANBERRIES.

Thomas Gates.....	Marietta, Ohio.
James T. Cherry.....	Putnam, Ohio.
Heinrich Ely	Elyria, Ohio.
Mrs. Judge Burchard.....	Warren, Ohio.
Mrs. John Irwin.....	Cleveland, Ohio.

LXXI.—VEGETABLES.

Twelve best stocks of celery.....	\$3
Six best heads of cauliflower.....	3
Six best heads broccoli.....	3
Twelve best white table turnips.....	3
Twelve best carrots.....	3
Twelve best table beets.....	3
Twelve best parsnips.....	3
Peck of the best onions	3
Six best heads of cabbage.....	3
Peck of the best tomatoes.....	3
Two of the best purple egg plants.....	3
Peck of the best sweet potatoes.....	3
Best half peck of peppers.....	3
Best six fall marrow squashes.....	3
Best half peck of Lima beans.....	3
Best half peck of white beans.....	2
Best bunch of double parsley.....	1
Three best squashes.....	1
Largest pumpkin.....	3
Twelve best ears of sweet corn.....	5
Best half bushel of table potatoes.....	5
Second do do do	2
Best seedling potato.....	3
Best and greatest variety of vegetables raised by the exhibitor.....	8
Best twelve heads lettuce.....	3
Second do do	2
Best three bunches salsify.....	2
Second do do	1

Discretionary premiums in books, plate or money, will be recommended on choice garden products, not above enumerated.

AWARDING COMMITTEE ON VEGETABLES.

John Stair.....Cleveland, Ohio.
Ezekiel Brown.....Leesburgh, Ohio. ●
Judge Burchard.....Warren, Ohio.

PREMIUMS ON FIELD CROPS.—OHIO.

To be awarded at the annual meeting of the State Board, at Columbus, on the 8th day of December next.

Best crop of wheat not less than 5 acres—not less than 40 bushels per acre,	\$20
Second do do do do do do do do do	10
Best crop of Indian corn, not less than 5 acres, to be shelled and weighed between the 15th of Nov. and 1st of Dec., not less than 100 bush. pr acre,	20
Second do do do do do do do do do	10
Best crop of barley, not less than one acre, 50 bushels per acre.....	10
Second do do do do do do do do	5
Best crop of rye, not less than one acre, 40 bushels per acre.....	10
Second do do do do do do do do	5
Best crop of oats, not less than one acre, 60 bushels per acre.....	10
Second do do do do do do do do	5
Best crop of buckwheat, not less than one acre, 30 bushels per acre.....	10
Second do do do do do do do do	5
Best crop of beans, not less than one acre, 25 bushels per acre.....	10
Second do do do do do do do do	5
Best crop of potatoes of good table quality, not less than $\frac{1}{4}$ an acre, 200 bushels per acre.....	10
Second do do do do do do do do	5
Best crop of sweet potatoes, not less than $\frac{1}{4}$ of an acre.....	6
Second do do do do do do do do	5
Best crop of onions, not less than $\frac{1}{4}$ an acre.....	6
Second do do do do do do do do	3
Best crop of field beets, not less than $\frac{1}{4}$ an acre, 60 lbs. per bushel, 400 bu. per acre.....	8
Second do do do do do do do do	5
Best crop of carrots, not less than $\frac{1}{4}$ an acre, 60 lbs to the bushel, 400 bu. per acre.....	8
Second do do do do do do do do	5
Best one acre of corn fodder, with account of cultivation and preservation,	6
Second do do do do do do do do	3
Best $\frac{1}{4}$ acre of hops, with full account as last.....	5
Second do do do do do do do do	3
Best $\frac{1}{4}$ acre of flax, same account as last.....	5
Second do do do do do do do do	3
Best $\frac{1}{4}$ acre of hemp, same account.....	5
Second do do do do do do do do	3
Best $\frac{1}{4}$ acre of tobacco, same account.....	5
Second do do do do do do do do	3
Best acre of broom corn.....	5
Second do do do do do do do do	3

Best acre of clover seed.....	\$5
Second do	3
Best acre of timothy seed.....	5
Second do	3
Best five acres of flax-seed, not less than 12 bushels per acre.....	10

Statements to be furnished by applicants for Premiums on Farm Crops.

1. The land shall be measured by some competent person, who shall make affidavit of the accuracy of the measurement, and the quantity of ground.

2. The applicant shall make affidavit, according to the forms annexed, to the quantity of grain raised on the ground, entered on the premium list, which affidavit must accompany the application for premium, together with a sample of the grain.

3. The main object of the Society being to promote profitable cultivation, they do not propose to offer premiums for crops produced by extravagant expenditure; therefore, a detailed, certified, account of the expense of cultivation must be made. The expense of labor and manure should be particularly stated, and the kind of manure given.

4. The kind and condition of the soil; the quantity and kind of seed used; the time and mode of putting it in the ground, should be particularly stated.

5. The grain must either be weighed or measured in a legal half bushel. Corn to be measured in the ear, and an average specimen of not less than 20 bushels of ears shelled, cleaned, and weighed or measured, as above, after the 15th of November, and the number of bushels, thus estimated, stated in the affidavit.

Forms of Affidavits.

— County, ss.—A. B. being duly sworn, says he accurately measured the land upon which C. D. raised a crop of — the past season, and the quantity of land is — acres, and no more. A. B.

Sworn to before me, this — day of —, 185 .

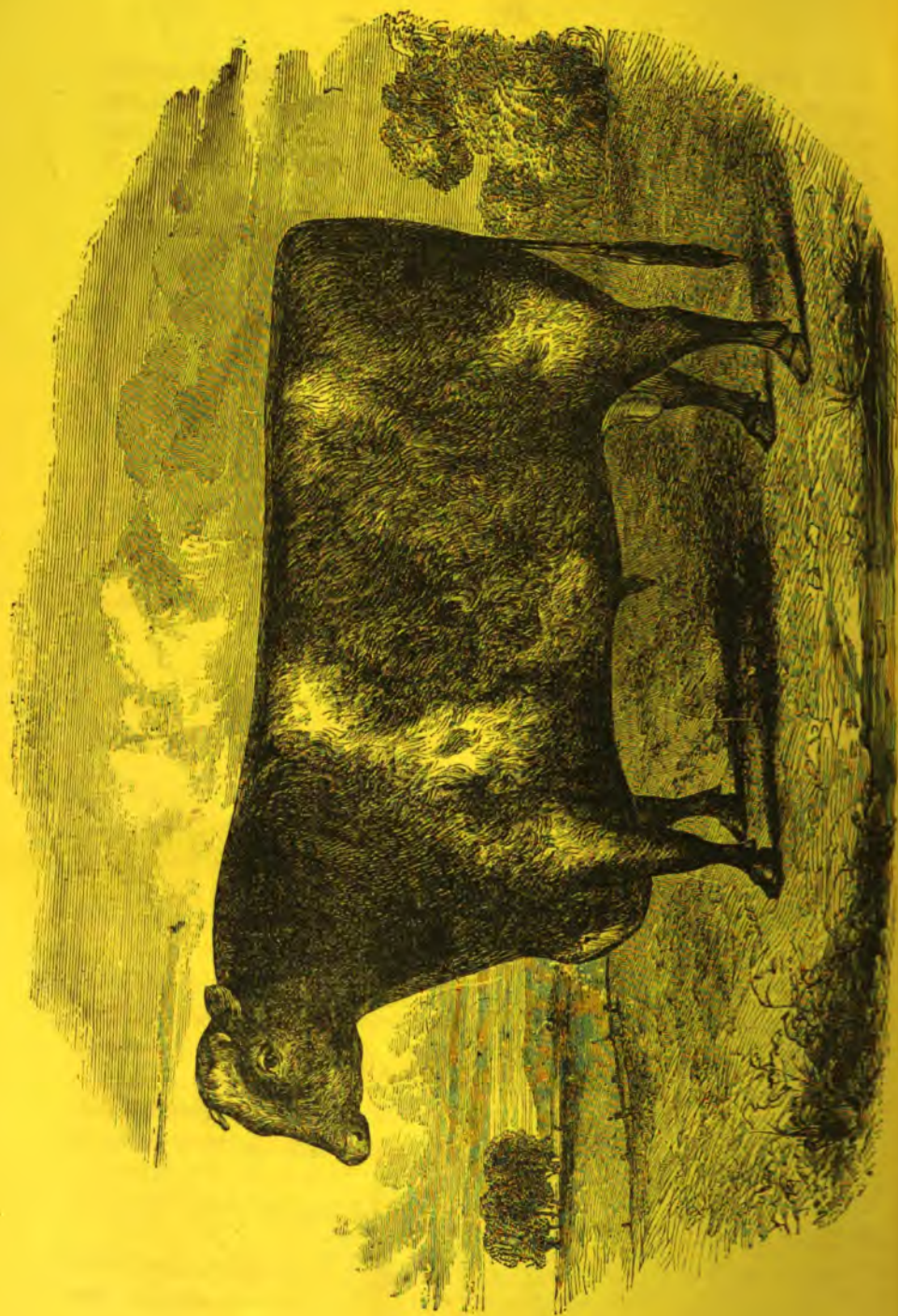
— —, Justice.

— County, ss.—C. D. being duly sworn, says that he has raised a crop of — the past season, upon the land measured by A. B., and that the quantity of grain raised thereon was — bushels, and no more, weighed (or measured in a sealed half bushel, as the case may be,) and that the statements in regard to the manner of cultivation, &c., are correct, to the best of my knowledge. C. D.

Sworn to before me, this — day of —, 185 .

— —, Justice.





HEAVY COW BREED.

(XL)

PEDIGREE OF THE EARL OF SEAHAM,

SHORT HORN BULL, IMPORTED BY A. STEVENS AND J. M. SHERWOOD, OF NEW YORK, AND HISTORY OF THE PRINCESS FAMILY OF SHORT HORNS.

The following description of the importation, pedigree and history of those animals has been furnished to the Ohio State Board of Agriculture, and is, by their direction, published in the Report of the Board.

IMPORTED SHORT HORNS — PRINCESS TRIBE.

Having at the Ohio State Agricultural Show, held at Columbus, in September, 1851, in conjunction with Col. Sherwood, shown the bull Earl of Seaham, who won the first prize in the class of foreign short horn bulls, I think it proper to give you an account of him and his family, and the cattle of the same tribe, which I selected in England, and imported in 1849 and 1850, for Col. Sherwood and myself.

The animals of this importation may all be found registered in the English Short Horn Herd Book, a work now consisting of nine volumes, devoted exclusively to the recording the pedigrees of short horn cattle.

The numbers appended to the bulls, in the following pedigrees, are their numbers in the herd book.

EARL OF SEAHAM.

(10,181.) Roan; calved April 21, 1848; bred by John Stephenson, Esq., Wolviston, county of Durham, England; imported 1850, by A. Stevens and J. M. Sherwood; got by Earl of Antrim (10,174); dam, Primrose, by Napier, (6238); grandam, Rose Ann, by Bellerophon (3119); great grandam, Rosette, by Belvedere (1706); gr. gr. grandam, Red Rose, by Waterloo (2816); gr. gr. gr. grandam, Moss Rose, by Baron (58); gr. gr. gr. gr. grandam, Angelina, (bred by Sir Henry Vane Tempest,) by Phenomenon (491); gr. gr. gr. gr. grandam Anna

Boleyne, by Favorite (252); gr. gr. gr. gr. gr. gr. grandam, Princess, (bred by Robert Colling,) by Favorite (252); gr. gr. gr. gr. gr. gr. grandam, Brighteyes, by Favorite (252); gr. gr. gr. gr. gr. gr. gr. grandam, Brighteyes, (bred by Alexander Hall,) by Hubback (319); gr. gr. gr. gr. gr. gr. gr. gr. grandam, Brighteyes, by Snowdon's Bull (612); gr. gr. gr. gr. gr. gr. gr. gr. grandam, Beauty, (bred by Thomas Hall,) by Masterman's Bull, (422); gr. gr. gr. gr. gr. gr. gr. gr. grandam, Duchess of Atholl, by Harrison's Bull (231); gr. gr. gr. gr. gr. gr. gr. gr. gr. gr. gr. gr. grandam, Tripes, (bred by C. Pickering,) by the Studley Bull (626); gr. gr. gr. gr. gr. gr. gr. gr. gr. gr. gr. grandam, bred by Mr. Stephenson of Ketton, in 1739. (See 9th vol. Hard Book, pages 65 and 526.)

RED ROSE II.

Red; calved in 1846; bred by John Stephenson, Esq., the property of J. M. Sherwood; got by Napier (6238); dam, Tuberoze, by South Durham (5281); grandam, by Rose Ann, by Bellerophon (3119), &c.; as in the pedigree of Earl of Seaham.

RED ROSE III.

Roan; calved in 1848; bred by John Stephenson, Esq., the property of J. M. Sherwood; got by Gen. Sale (8099); dam, Maid of Orleans, by Mameluke (2258); grandam, Helena, by Waterloo (2816); great grandam, Moss Rose, by Baron (58), &c., as in the pedigree of Earl of Seaham.

Red Rose III won the second prize for yearling short horn heifers, at the Show of the New York State Agricultural Society, at Syracuse, September, 1849, beaten by Princess II, who won the first prize.

TUBEROZE II.

Roan; calved in 1848; bred by John Stephenson, Esq.; the property of J. M. Sherwood; got by Earl of Antrim, (10,174); dam, Tuberoze, by South Durham (5281); grandam, Rose Ann, by Bellerophon (3119), &c.; as in the pedigree of the Earl of Seaham.

LADY SALE II.

Roan; calved in 1850; bred by John Stephenson; the property of J. M. Sherwood; got by Earl of Chatham (10,176); dam, Lady Sale, by Gen. Sale (8099); grandam, Clara, by Napier (6238); great grandam, Maid of Orleans, by Mameluke (2258), &c.; as in the pedigree of Red Rose III.

PRINCESS I.

Red ; calved in 1846 ; bred by Mr. Stephenson ; the property of Ambrose Stevens, of New York ; got by Napier (6,238) ; dam, Rose Ann, by Bellerophon (3119), &c.; as in the pedigree of Earl of Seaham.

PRINCESS II.

Roan ; calved in 1848 ; bred by Mr. Stephenson ; the property of Ambrose Stevens, of New York ; got by Gen. Sale (8099) ; dam, Duchess, by Mr. Bates' Fourth Duke of Northumberland (3649) ; grandam, Rosette, by Belvedere (1706) ; &c.; as in the pedigree of Earl of Seaham.

Princess II won the first prize for yearling short horn heifers, at the Show of the New York State Agricultural Society, at Syracuse, in Sept., 1849 ; and the first prize for two year old short horn heifers, at the Show of the same Society, at Albany, Sep., 1850. These are the only times she has ever been shown.

PRINCESS III.

Roan ; calved in 1848 ; bred by Mr. Stephenson ; the property of Ambrose Stevens, of New York ; got by Napier (6238) ; dam, Rose Ann, by Bellerophon (3119), &c.; as in the pedigree of Earl of Seaham.

PRINCESS IV.

Roan ; calved in 1848 ; bred by Mr. Stephenson ; the property of Ambrose Stevens, of New York ; got by Napier (6238) ; dam, Princess I, by Napier (6238) grandam, Rose Ann, by Bellerophon (3119), &c.; as in the pedigree of Earl of Seaham.

PRINCESS V.

Roan ; calved September, 1849 ; bred by Mr. Stephenson ; the property of Ambrose Stevens, of New York ; got by Earl of Chatham (10,176) ; dam, Tuberosa, by South Durham (5281) ; grandam, Rose Ann, by Bellerophon (3119), &c.; as in the pedigree of Earl of Seaham.

LORD VANE TEMPEST (10,469.)

Red and white ; calved in 1849 ; bred by Mr. Stephenson ; the property of J. M. Sherwood ; got by Earl of Chatham (10,176) ; dam, Princess I, by Napier (6238) ; grandam, Rose Ann, by Bellerophon (3119), &c.; as in the pedigree of Earl of Seaham.

Lord Vane Tempest won the first prize for short horn bull calves, at the Show of the New York State Agricultural Society, at Albany, September, 1850 ; and the first prize for yearling short horn bulls at the Show of the same Society, at Rochester, September, 1851. Shown only on these two occasions.

WOLVISTON.

Red ; calved in 1850 ; bred by Mr. Stephenson ; the property of Ambrose Stevens, of New York ; got by Earl of Chatham (10,176) ; dam Princess, by Napier (6238) ; grandam, Maid of Athens, by St. Albans (5047) ; great grandam, Helena, by Waterloo (2816) ; great great grandam, Moss Rose, by Baron (58), &c.; as in the pedigree of Earl of Seaham.

EARL VANE.

Red, with a little white ; imported in 1850, in his mother's belly ; the property of Ambrose Stevens ; calved in 1851 ; got by Earl of Chatham (10,176) ; dam, Princess I, by Napier (6238) ; grandam, Rose Ann, by Bellerophon (3119), &c.; as in the pedigree of Earl of Seaham.

THIRD DUKE OF CAMBRIDGE. (5941.)

Roan ; calved 1841 ; bred by Thomas Bates, Esq., the property of Ambrose Stevens and J. M. Sherwood ; got by Duke of Northumberland (1940) ; dam, Waterloo II, by Mr. Stephenson's Belvedere (1706) ; grandam, Waterloo I, by Mr. Stephenson's Waterloo (2816) ; great grandam, Lady Antrim, by Waterloo (2816) ; great great grandam, Anna, by Lawnsleves (365) ; great great great grandam, Angelina, by Phenomena (491), &c.; as in the pedigree of Earl of Seaham.

Third Duke of Cambridge won the first prize for short horn bulls, at the Show of the New York State Agricultural Society, at Syracuse, September, 1849 ; and the first prize for short horn bulls, of the same Society, at Albany, September, 1850. Has only been shown on these two occasions.

WATERLOO V.

Roan ; calved in 1841 ; bred by Mr. Bates, of Kirkhamington ; the property of Ambrose Stevens ; got by Duke of Northumberland (1940) ; dam, Waterloo III, by Norfolk (2377) ; grandam, Waterloo I, by Mr. Stephenson's Waterloo (2816), &c.; as in the pedigree of the Third Duke of Cambridge (5941.)

DUKE OF NORTHUMBERLAND. (1940.)

Bred by Mr. Bates ; was got by Mr. Stephenson's Belvedere (1706) ; dam, Duchess 34th, by Mr. Stephenson's Belvedere (1706), &c.

FOURTH DUKE OF NORTHUMBERLAND. (3649.)

Bred by Mr. Bates ; was got by Short Tail (*a son of Belvedere, 1706*) ; dam, Duchess 34th, by Mr. Stephenson's Belvedere (1706), &c.

SHORT TAIL.

Bred by Mr. Bates ; was got by Mr. Stephenson's Belvedere (1706) ; dam, Duchess 32d, by Second Hubback, &c.

Of the bulls in the preceding pedigrees, Mr. Stephenson bred *Earl of Chatham*, (10,176;) *Earl of Antrim*, (10,174;) *General Sale*, (8099;) *Napier*, (8238;) *South Durham*, (5281;) *Bellerophon*, (3119;) *Belvedere*, (1706;) and *Waterloo*, (2816.) These bulls are all of the PRINCESS TRIBE, and trace their pedigrees back into the same lineage as Earl of Seaham.

The cuts, which illustrate this account, are portraits of animals mentioned here as imported, or are sires and dams, &c., of those tracing in the pedigrees.

The Ohio company imported several animals, got by Mr. Stephenson's *Belvedere*, (1706,) and they were among the best the company imported.

Of these were Earl of Darlington, (1944,) Young Waterloo, (2817,) Rose of Sharon, and Teeswater. The bull Reformer, (2505,) imported by the company, was got by Mr. Stephenson's Waterloo, (2816.)

The late Felix Renick, Esq., told me that the best bull, either as an animal or a getter, he ever saw, either in England or America, was Mr. Stephenson's *Belvedere*, (1706.) He also informed me that he had offered Mr. Stephenson more money for his Rosette, a daughter of *Belvedere*, than he had ever either offered or paid for any animal which he bought in England.

HISTORY OF THE PRINCESS TRIBE OF SHORT HORNS.

More than two centuries since, the Aislabie family of Aislabie and Studley, Eng., possessed an extraordinary tribe of cattle. From them the Pennimans of Ormsby, the St. Quintins, of Scampston, and the Milbanks, of Barningham, procured cattle. Mr. Sharter, of Chilton, near Ketton, got cattle from Barningham, and from them bred the Studley bull, (626.)

In 1684, Mr. Stephenson, of Acklam, bought a cow of the Aislabie family, and afterwards sent cows to Studley, to be served, and used bulls from Studley, in the possession of the Pennimans, of Ormsby. In 1731, Mr. Stephenson, Jr., (son of the one named above,) removed from Acklam to Ketton, in Durham, and took with him the cattle descended from the original cow got of the Aislabies; and he took no others than those so descended in the female line only. Mr. Stephenson, of Ketton, and his son, remained at Ketton until the year 1765. From the last, Mr. Stephenson of Ketton, Mr. Hunter of Hurworth, the breeder of *Hubback*, procured the *grandam* of *Hubback*, and she and her *grandson Hubback* were of this tribe.

In 1739, Mr. Stephenson of Ketton, sold to Mr. Pickering of Foxton, a female of the Studley or Aislabie tribe of cattle; out of this cow he bred the cow *Tripes*, got by the Studley bull, (626.) Mr. Pickering sold *Tripes* to Mr. Thomas Hall of Haughton; Mr. Hall bred *Duchess of Atholl*, got by Harrison's bull, (292,) out of *Tripes*; and out of *Duchess of Atholl*, he bred *Beauty*, got by Masterman's bull, (422.) On the death of Mr. Thomas Hall, Mr. Alexander Hall, succeeded to his estate, and he bred *Brighteyes*, by Snowden's bull, (612,) out of *Beauty*, by Masterman's bull, (422;) and out of *Brighteyes*, by Snowden's bull, he bred *Brighteyes* by *Hubback*, (319.) *Brighteyes*, by Snowden's bull, (612,) and

Brighteyes by Hubback, (319,) were sold in 1784, by A. Hall to Robert Colling of Barmpton. Mr. Colling bred Brighteyes by Favorite, (252,) out of Brighteyes by Hubback, (319;) and out of Brighteyes by Favorite, (252,) he bred Princess by Favorite, (252.) Princess was sold in 1802, by Robert Colling, to Sir Henry Vane Tempest, Bart., of Mynyrd. Sir Henry bred Anna Boleyn by Favorite, (252,) out of Princess; and Angelina by Phenomenon, (491,) out of Anna Boleyn. Sir Henry died in 1813, and his widow, the Countess of Antrim, bred Anna by Lawnsleeves, (365,) out of Angelina. In 1818, the Countess sold Angelina to John Stephenson, Esq., of Wolviston.

All the sires and dams in the pedigrees of these imported cattle, which were bred by Mr. Stephenson, occurring after Angelina, were bred by him, except Mameluke and Fourth Duke of Northumberland.

I give the certificate of Alexander Hall, as to this tribe of cattle. The facts in relation to the Stephenson's of Acklam and Ketton, were obtained from the papers of the late Dr. Stephenson of Heddon, who was born at Ketton, in 1745.

Mr. Hall says: "Mr. Charles Colling bought a heifer, (Haughton,) of me, got by Fawcett's bull, afterwards called Hubback, (which heifer bred the bull Foljambe.) This heifer's dam was got by a bull owned by Mr. C. Colling, Senior; the grandam, (sister to the Duchess of Atholl,) was got by Harrison's bull out of Tripes, by the Studley bull."

"Mr. Robert Colling bought a twin heifer, (Brighteyes,) of me, that was got by Mr. Snowdon's bull, the sire of Hubback, and also a heifer calf, (Brighteyes,) got by Hubback out of her; and he bought her sister a year or two after, which he fed off, and she was an extraordinary fat one. Their dam, (Beauty,) was got by Mr. James Masterman's bull, and was out of Mr. Thomas Hall's cow, sold to the Duchess of Atholl. This last cow, (called the Duchess of Atholl,) was got by Mr. Harrison's bull, and was out of a famous good cow of Mr. Thomas Hall's, that was a great grazier, and was called Tripes. Tripes was got by the Studley bull.

"The dam of the twins, sold by me to Robert Colling, getting only grass, with no other food, gave eighteen quarts, ale measure, of milk, at a milking, or thirty-six quarts a day, for six weeks after calving, and did this two years in succession, having twins each year. I sold her milk at Darlington, (two miles from Haughton where I live,) twice a day, and it was measured.

"Mr. Robert Colling called the first twin heifer that he bought of me, *Brighteyes*, for the reason that she had remarkably bright eyes. The grandam of this Brighteyes, and the grandam of Haughton, (Foljambe's dam,) were both by Harrison's bull, and were own sisters, out of Tripes.

"I bred a fine cow out of Brighteyes' dam, that was put dry of her milk in October, and sold to the butcher on the first Monday of March following, at twenty-five guineas, and weighed eighty-four stones, (1176 lbs,) in her four quarters, & beef only.

"My Brother, Mr. Thomas Hall, bought the cow Tripes, from Mr. Charles Pickering of Foxton, near Sedgfield, who bred her, and her dam was bred by Mr. Stephenson of Ketton, of whom Mr. Pickering got her.

"Mr. Thos. Hall sold a sister to the dam of Brighteyes for twenty-five guineas, to go south. Another one, half sister to the dam of Brighteyes, was sold to Mr. Hill of Blackwell, for twenty-five guineas; and she bred a heifer that was matched against one owned by Mr. Hammond of Hutton, Bonville, and won the match. Mr. Hammond's stock at that day were in great repute.

"I bred many extraordinary cattle from this tribe of short horns, and sold them at high prices for those days."

The foregoing certificate was made in March, 1820, by Mr. A. Hall, at the request of Mr. Bates, the distinguished breeder, for the information of Mr. George Coates, who was then preparing the first volume of the English Herd Book.

Mr. Bates used the blood of Mr. Stephenson's herd with signal advantage. He bred his herd mainly to Mr. Stephenson's bull, Belvedere, (1706,) from 1831 to 1838, and his prize animals, got by Belvedere, were numerous and extraordinary for excellence. Among these were the very distinguished bull, *Duke of Northumberland*, (1940,) winner at the great English show, in 1839, at Oxford, of the first prize; and the first prize at York, in 1842; *Duchess* 34th, winner at York, in 1842, beating Mr. Booth's celebrated cow, Necklace, (which won nineteen premiums, and was never beaten save this once; *Duchess* 43d, winner of the first prize at Oxford, in 1839, for yearling heifers, and winner of the first prize for cows at Hull, in 1841; *Duchess* 42d, winner of the first prize for in-calf heifers at Oxford, in 1839, and winner of the second prize for cows at Hull, in 1841, beaten by *Duchess* 43d; and *Princess of Cambridge*, winner of the first prize for cows at Cambridge, in 1840. Duke of Cambridge, (3637,) winner of the first prize as bull calf at Cambridge, in 1840, and winner of first prize for yearling bulls at Hull, in 1841, was got by duke of Northumberland, (1940,) dam by Belvedere, (1706,) grandam and great grandam by Waterloo, (2816,) and is a full brother to Third Duke of Cambridge.

The Princess tribe have no superior in England or America for *style, quality, milk and feeding capacity*. Red Rose II., made sixty pounds four ounces of butter in thirty days, in May and June, 1851, and forty-seven pounds eleven ounces in August and September, 1851. During the last period, the weather was excessively hot and dry. The cows of this tribe give milk not only rich in quality, but abundant in quantity. Earl of Seaham, in six months, made a growth of six hundred pounds.

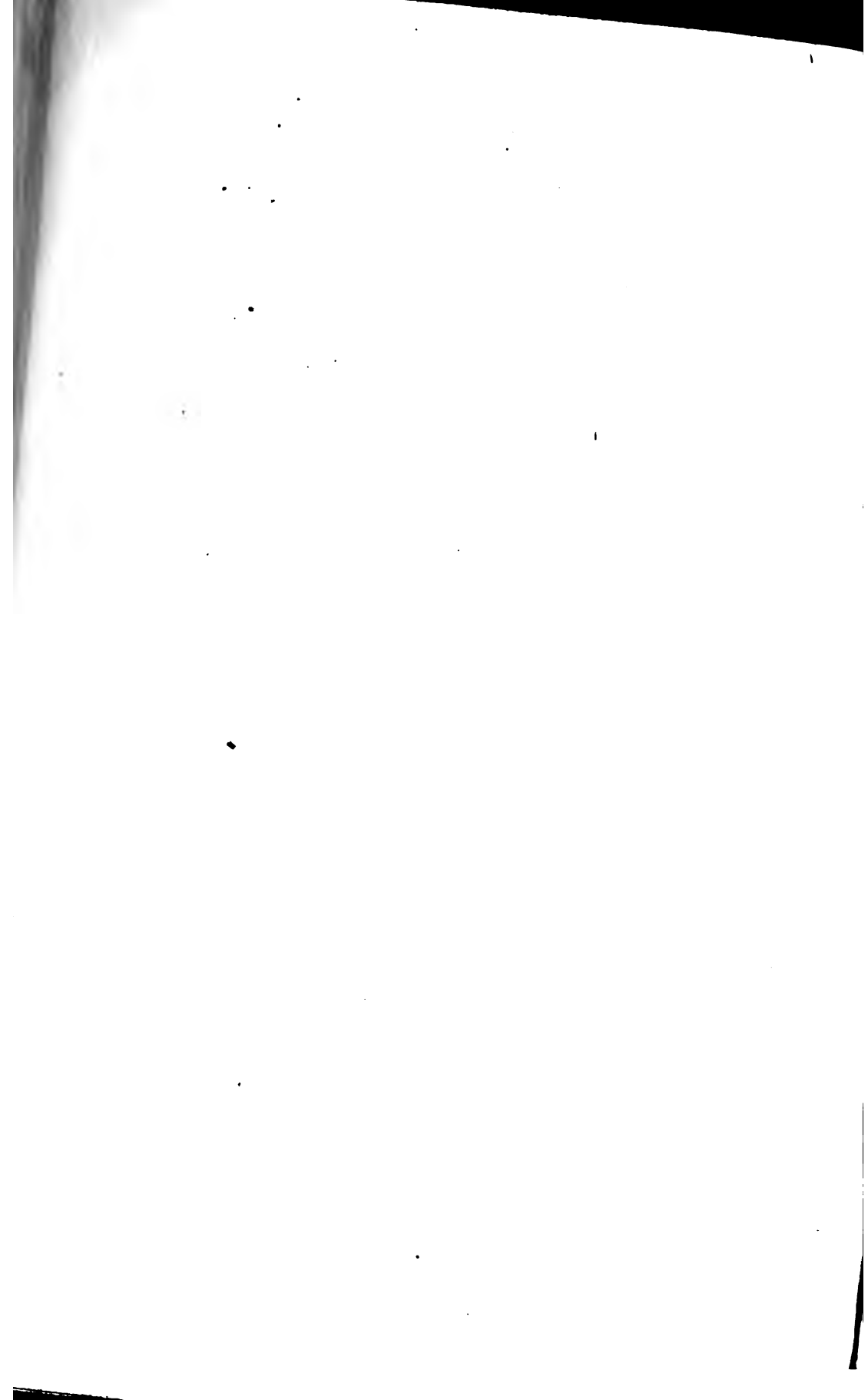
Such is the history of the Princess Tribe of short horns, and of the animals in particular, which I selected in England.

The Ohio breeders derived great benefit from the animals which were imported by the Ohio company possessing this blood, and I confidently look to a great good from this more recent importation.

AMBROSE STEVENS, New York City.

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